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High-Extraction Coal Mining in Illinois: Effects on Crop Production, 1985-1987



by R. G. Darmody, I. J. Jansen, S. G. Carmer, J. S. Steiner University of Illinois

Illinois Mine Subsidence Research Program

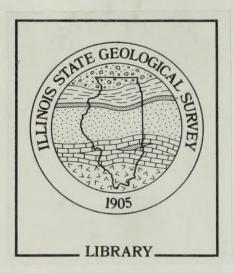
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The **Illinois Mine Subsidence Research Program** (IMSRP) was established in 1985 to investigate methods and develop guidelines for underground mining operations that aim to maximize coal extraction yet preserve the productivity of prime farmland. The research program was initiated by the Illinois Coal Association and the Illinois Farm Bureau.

The Illinois State Geological Survey, a division of the Illinois Department of Energy and Natural Resources, is directing the IMSRP. Participating research institutions include Southern Illinois University at Carbondale, the University of Illinois at Urbana-Champaign, Northern Illinois University, and the Illinois State Geological Survey. A five-year Memorandum of Agreement, signed by the State of Illinois and the Bureau of Mines, U.S. Department of the Interior, ensures collaboration, cooperation, and financial support through 1991. Major funding is also provided by the Illinois Coal Development Board.

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Illinois Mine Subsidence Research Program

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ABSTRACT

The impact of coal mine subsidence-induced effects (SIE) on corn yields in 1985, 1986, and 1987 in Illinois was investigated. Five study areas were selected in three counties in southern Illinois, representing longwall (LW) and high-extraction retreat (HER) mines, as well as unmined control areas. Study areas were photographed from the air in early, mid-, and late growing season in 1985 and early and midgrowing season in 1986 and 1987. After the photographs were analyzed, areas deemed to have SIE were marked on them. Three classes of SIE were established: slight, moderate, and severe. In the fall of each year, sites representing all SIE classes, including unaffected control areas, were harvested for corn yield sampling. No significant corn yield difference was found between the control and slight SIE class in any year. Significant yield reductions were noted for the moderate class: 52 percent in 1985, 56 percent in 1986, and 22 percent in 1987 (average of 43 percent). Significant reductions were also found in the severe class: 95 percent in 1985, 99 percent in 1986, and 91 percent in 1987 (average of 95 percent).

Total acreage (or extent) and intensity of SIE classes were measured. There was a significant difference between LW and HER mining methods in the total area of associated SIE classes. Over the three years, the average total area in the moderate or severe SIE classes was 7.5 percent for LW mining and 3.3 percent for HER mining. The weighted average reduction in yield per acre of land above the mines was calculated by multiplying the area of each SIE class by the associated reduction in yield. For LW mines, the weighted yield reduction averaged over the three years was 4.7 percent. For HER mining, the weighted yield reduction averaged over the three years was 1.8 percent.

The results for individual years varied with weather. The growing season in 1985 was wetter than normal in the study area, and since SIE is related to excess soil moisture, the 1985 results represented a worse than average year. The 1987 season was unusually dry, and the yield reductions were less than in 1985. The 1986 season probably represents a "normal" year. The yield reductions that year were close to the averages for the three years of the study. The results over the three years reflect (along with differences in weather during the growing seasons) differences in mine company operations, crop sample areas, and overall study areas. Sites were selected by aerial photography without regard to mitigation. Mitigation may have affected results, but the study of mitigation was outside the scope of this research.

INTRODUCTION

With the traditional room-and-pillar mining method, the mine structure is intended to leave enough coal unmined in pillars to support overlying strata and prevent subsidence effects on the surface. Room-and-pillar recovers only about half of the coal in the ground and does not guarantee that subsidence will not occur. The unplanned subsidence that may result from this type of mining is difficult to manage at the surface because the resultant small closed depressions can form at any time after an area is mined.

In the 1950s (Flowers, 1957), some mine operators began using a different mining method called high-extraction retreat (HER). This method involved the planned removal of as many of the supporting pillars as possible. In the 1970s a widely used European method, longwall (LW), was adopted in the United States. This method removes all of the coal along a broad front with subsequent subsidence of the mined-out area. Longwall and high-extraction retreat remove more coal from the mine production area than is possible with the room-andpillar method, while allowing the surface to subside more or less uniformly over the mined-out area. With these planned subsidence techniques, most of the subsidence takes place within a few weeks, and very little settlement occurs after the first few years. Because the landscape drops more or less uniformly, surface drainage may be disrupted less with high-extraction techniques than with room-andpillar.

Proponents claim that planned subsidence mining can be undertaken without significant effects on the land. The subsidence that occurs is usually more easily repaired than unplanned subsidence. But there has been some public resistance to planned subsidence mining, perhaps partly because of adverse publicity concerning the effects of unplanned subsidence over old mines. Research is necessary to adequately determine how modern planned subsidence mining techniques affect subsequent land use. Regulatory bodies and the public need more information to intelligently decide whether to encourage such methods as a means to maximize coal extraction and minimize hazards to future land use or to discourage these methods because of unacceptable effects on land resources.

Subsidence primarily affects agriculture by altering the natural topography of the land surface. Farmability can be impaired by alteration of subsurface soil drainage, soil chemistry and structure, and surface drainage. Crops can be drowned if surface water stands too long in closed depressions that formed as a result of subsidence. Both the time of formation and duration of ponding are important to crop response. Seasonal patterns of rainfall distribution can greatly influence the impact of subsidence and ponding.

Another factor that can influence the relative importance of subsidence is soil type. Some soils respond differently to ponding than others. Crops also vary in their response to ponding. The most

important factor, though, is pre-mine topography. If the pre-mine topography is such that no closed depressions form, the impact of subsidence on crop yield will be less significant. In general, the more nearly level the landscape, the more likely that subsidence will create closed depressions.

Mine subsidence has been recognized as a problem for a long time in Illinois. Young (1916) recognized the problem over 70 years ago; Wascher et al. (1938) noted it as a new problem for agriculture in Vermilion County. But only limited research has been done on mine subsidence. Hunt (1980) reported on surface subsidence due to coal mining in Illinois. His work concerned the geological causes of subsidence and did not address the agricultural impacts. DeMaris and Bauer (1983), using aerial photographs, reported on the identification of subsided areas in central Illinois. McSweeney and Jansen (1984) studied the effect of stripmine reclamation methods on crop yields but did not consider subsidence effects.

The effects of mine subsidence on crop yields have not been well documented, although some related research has been done. Guither et al. (1985) conducted a survey on the economic impact of underground mining on Illinois agricultural land. Farmers were queried on subsidence and in particular were asked to estimate their dollar loss from subsidence. One important conclusion of the study was that a research project was needed that measured actual yield losses due to subsidence.

The research reported here was conducted in consideration of the importance of agriculture and coal mining to Illinois and the need for better understanding of the impact of subsidence on crop production. The specific objectives of this study were to i) evaluate the effects of planned subsidence on subsequent agricultural suitability of affected land, ii) compare the effects of longwall mining with those of high-extraction retreat, and iii) estimate and record subsidence-induced reduction in corn yield over three growing seasons.

METHODS

Mine Land Analysis

The individual study areas were located in Franklin, Jefferson, and Williamson Counties over high-extraction retreat (HER) or longwall (LW) mines. Each study area included surrounding unmined areas for comparison (Figure 1). Aerial photographs were used in selecting study areas. Individual land-survey township sections represented sample units. Large bodies of water or non-agricultural land were eliminated from the study. Mine boundaries from unpublished mine maps were traced onto 7 1/2-minute topographic quadrangle maps; these maps and pre-mine aerial photographs served as guidelines for selecting the individual study areas. The study areas were square-mile survey sections (59 sections in 1985, 69 in 1986, and 82 in 1987). The

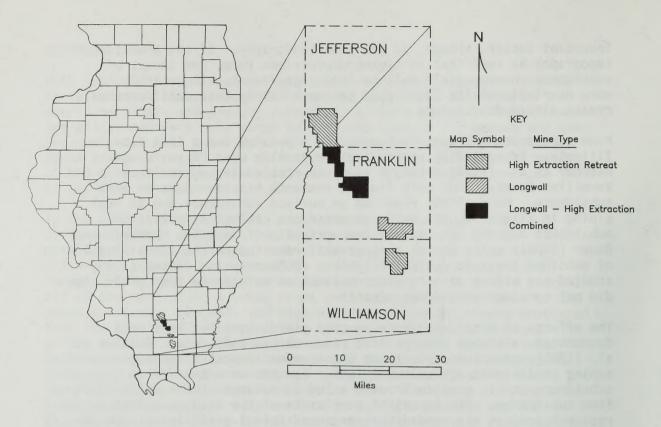


Figure 1 General locations of the study areas.

number of study areas was increased each year in response to increased research funding levels and expansion of the mines.

Aerial photographs of the study areas were taken on 4 May, 17 July, and 6 September 1985, on 8 April and 16 July 1986, and on 9 April and 16 July 1987. The spring flights consisted of two sets of 1:12,000 photographs, one panchromatic and the other black-and-white infrared. For the 1985 July flight, color infrared and natural color transparencies were obtained at the same scale. The 1985 September and 1986 and 1987 July flights were photographed as natural color transparencies. All photos were taken with 60 percent endlap and 30 percent sidelap to give stereo coverage. The spring flights were taken to give a view of bare soil under moist field conditions and the later flights to show crop response to soil conditions.

The study areas include all or parts of seven mines in 1985 and nine in 1986 and 1987. Some mines combined LW and HER techniques, and others used only one of type of mining. The mines are listed in Table 1.

Table 1 Mines of the study areas

Name	Mine type	County
Inland 1	High-extraction retreat	Jefferson
Orient 3	High-extraction retreat	Jefferson
Orient 4	High-extraction retreat	Williamson
Orient 6 [†]	High-extraction retreat	Jefferson
01d Ben 25	Longwall (HER in places)	Franklin
01d Ben 27	Longwall (HER in places)	Franklin
Old Ben 21	High-extraction retreat (longwall in places)	Franklin
Old Ben 24	High-extraction retreat (longwall in places)	Franklin
01d Ben 26 [†]	High-extraction retreat (longwall in places)	Franklin

Not studied in 1985.

The mines include active longwall panels or high-extraction retreat panels and unmined areas, as well as areas with abandoned room-and-pillar panels and room-and-pillar entries. To calculate the estimated area of each mine, only the area within the actual LW or HER panels was used.

Mine maps with the entries, longwall panels, high-extraction retreat panels, and room-and-pillar areas identified were traced from unpublished mine maps onto drafting film. The mine maps, topographic maps, early season photos, and pre-mine photos were compared, and observed mine subsidence effects were marked on the early season infrared photos. Both sets of photographs were viewed stereoscopically to determine where previous topography was altered by subsidence as indicated by increased wetness, relief changes, or both. Subsidence classes and the factors considered in assigning them are given in Table 2.

These tonal anomalies and topographic alterations were checked against pre-mine photographs to verify that they occurred subsequent to mining. The areas were also carefully checked to rule out other possible causes, such as natural soil patterns, construction features,

field boundaries, or land use changes. The three colors marked on the photos were related to the three SIE classes; red was severe, orange was moderate, and yellow was slight. Areas of suspected subsidence features delineated on the spring photos were checked against the same areas in the summer photos. Areas marked on the spring photos were enlarged or reduced to reflect later observed crop response. Many slight SIE areas marked in yellow on the spring photos showed no crop response in July.

Table 2 SIE classes as assigned on aerial photographs

SIE class	Evidence
None	No change from pre-mining photography
Slight	Topographic change without dark infrared signature (marked yellow on photo)
Moderate	Dark infrared signature (marked orange on photo)
Severe	Ponding or black infrared signature (marked red on photo)

Table 3 Land use classes as assigned on aerial photographs

Land use class	Criteria
Agriculture	Row crops, pastures, or orchards
Forest	Closed canopy trees
Water	Ponds, lakes, streams
Urban/other	Parking lots, buildings, lawns, industrial sites, roads, railways, recreational land, dumps, spoil piles, etc.

After the photos were edited, a dot-grid sampling technique was used to quantify features in the study area. The centers of ten-acre cells regularly arranged in a grid pattern on each square mile section served as the sample sites. This gave 64 sample sites per square mile. The grid was enlarged or reduced to accommodate the various scales of the maps and photos used, so each individual grid point sampled was the same on all maps and photos of a given section. Land use, soils, slopes, and other features were also recorded at each grid point. Table 3 gives the criteria used in assigning land use classes and Table 4 gives all the categories of information recorded at each grid point. The data were recorded and analyzed on a computer. All

the raw data recorded at each grid point are given in Appendix A. The 64 grid point method was checked against a 100 random point sample method. Results confirmed the validity of the 64 dot method (Darmody et al., 1988).

Table 4 Information recorded at each grid point in the study areas (Appendix A contains all data collected at each grid point)

Category	Number of classes	Sourcet
Mine name	9	b
Township	12	a
Section	91	a
Grid point	64	f
Land use	4	С
Subsidence effects	4	b,c,d
Mining type	6	b
Panel orientation	5	a,b
Soil type	16	é
Slope	7	a,e

ta. Available USGS 7 1/2-minute topographic maps.

b. Unpublished Illinois State Geological Survey mine maps.

c. Aerial photographs acquired for this study.

d. Archival aerial photographs of area.

e. Fehrenbacher and Odell (1959), Wheeler (1913), Norton (1923).

f. Assigned in this study.

Yield Estimates

Corn (Zea mays L.) was chosen as the indicator crop because it is the most important crop in the state and is grown extensively in the research area. Sites were selected for corn yield sampling to give representative samples for all classes of subsidence-induced effects (SIE) over all mines in the study areas. Sites were chosen after careful inspection of the aerial photos. A site constituted an individual corn field that included a marked SIE area and a control area. This approach was adopted to keep as constant as possible such farm management variables as corn hybrid, planting date, fertility levels, herbicides, and soil types.

At each site, one corn sample was taken from the affected area and one from an adjacent unaffected control area. Some sites had more than one pair of samples harvested. This was done in exceptionally large fields where soils or management may have differed over the field. Sampling was done by conventional agronomic methods (B. L. Vasilas, 1985, personal communication). A sample consisted of all of the ears on two adjacent 25-foot corn rows. The corn was air-dried, shelled, weighed, and analyzed for moisture. Yields were adjusted to the conventional 15 percent moisture (B. L. Vasilas, 1985, personal

communication). The difference between the control and the SIE samples at a site served as an estimate of yield reduction for that SIE class. All the yield reductions for a SIE class were converted to a percentage basis and then averaged to give the final estimate for that class. A total of 40 samples at 15 sites in 1985, 83 samples at 28 sites in 1986, and 79 samples at 31 sites in 1987 were harvested in late September and early October of each year. All of the yield estimate data are given in Appendix B. Also included in Appendix B are the soil fertility and crop quality data for 1987. The reduction in yield estimates reflects conditions over the study area for the particular sample year. Other costs that might be associated with subsidence, such as replanting and differential harvest losses, were not considered.

RESULTS AND DISCUSSION

Characterization of the Study Area

Land uses in the total study area are given in Table 5. The land uses over the years were similar. The study areas included 37,760 acres in 1985, 44,160 in 1986, and 52,480 in 1987. The average land use for the three years was about 73 percent for agriculture, 19 percent for forest, 3 percent for water, and 5 percent for urban/other.

Table 5 Land use in the study areas

	Ar	ea (acre	s)	Perc	ent of t	otal use
Land use	1985	1986	1987	1985	1986	1987
Agriculture Forest Water Urban/other	27,810 7,880 740 1,330	32,090 8,230 1,300 2,540	37,380 9,890 1,790 3,420	74 21 2 3	73 18 3 6	71 19 3 7
Total	37,760	44,160	52,480	100	100	100

Soils of the study areas are given in Table 6. With a few minor exceptions, all of the soils of the study area are rated as prime or important for agriculture (USDA, SCS 1983) and prime soils account for about 53 percent of the total study area. The soils of the study area are representative of the most common soils on the Illinois Till Plain in southern Illinois (Fehrenbacher et al., 1984); therefore, the results of the study should be valid for that portion of the state.

Table 7 gives some properties of the study area soils that would influence their sensitivity to subsidence. These properties include soil drainage group, susceptibility to flooding or ponding, and physiography. Those soils on flood plains or nearly level till

plains, or in slowly permeable and poorly drained groups would be highly sensitive to subsidence.

Table 6 Soils in the study areas[†]

	number	Slope	Listed as prime		nt (acr	
and	type	class	or important‡	1985	1986	1987
0	Water	-	-	650	1110	1640
2	Cisne	0-1.5	Prime	2140	2630	3000
3	Hoyleton	0-1.5	Prime	320	610	610
	•	1.5-4	Prime	640	990	1170
		4-7	Prime	110	150	160
4	Richview	0-1.5	Prime	40	40	40
		1.5-4	Prime	460	970	970
		4-7	Important	110	240	240
		7-12	Important	20	20	20
5	Blair	4-7	Important	40	20	60
8	Hickory	10-30	-	50	50	60
12	Wynoose	0-1.5	Important	580	640	710
		1.5-4	Important	200	370	480
		4-7	Important	30	50	50
		7-12	Important	10	10	10
13	Bluford	0-1.5	Prime	3220	4040	4610
		1.5-4	Prime	8130	9300	11260
		4-7	Important	7030	8480	10340
		7-12	-	2200	2480	3220
14	Ava	0-1.5	Prime	80	210	240
		1.5-4	Prime	1790	1590	1680
		4-7	Important	3010	2860	3220
		7-12	Important	2510	2620	3080
		12-18	Important	60	40	50
72	Sharon	0-1.5	Prime	730	770	920
84	Okaw	0-1.5	Important	-	100	100
		1.5-4	Important	30	30	30
		4-7	Important	80	80	80
108	Bonnie	0-1.5	Prime	-	720	1020
109	Racoon	0-1.5	Prime	-	80	150
		1.5-4	Prime	_	70	110
382	Belknap	0-1.5	Prime	1270	1140	1490
533	Disturbed /Urban	0-18	-	120	120	120
814	Hickory-Ava	1.5-4	Important	10	10	10
	Complex	4-7	Important	20	20	20
	Comp tox	7-12	Important	1840	1310	1320
		12-18	Important	220	170	180
		18-30	Important	10	10	10

†Sources: Fehrenbacher and Odell (1959), Wheeler (1913), Norton

1923). ‡Source: USDA, SCS (1983).

Table 7 Properties of agricultural soils in the study areast

2		m	4	2	ω	12	5 8 12 13 14 72	14		84	108	109	382 814	814
Drainage group‡ 4A		48	Н	38	_	4 A	48	1	1	4 A	3A	44	28	-
Flooding/ponding no		00	no	no	no	no	no	no	yes	yes	yes	yes	yes	no
Prime (slope)§ 1	1 1,3,5	3,5	1,3			1,3	1,3 / 1,3	П			1,3	П		
Physiography# b		p	U	ပ	U	q	U	ပ	ಡ	ಡ	ಡ	P	ಡ	O

from Fehrenbacher et al., 1984, and Drablos and Moe, 1984. See Table 6 for names associated with soil numbers.

Moderately permeable, well to moderately well drained.	<pre>foderately permeable, somewhat poorly drained.</pre>	/ slowly permeable, poorly or very poorly drained.	/ slowly permeable, somewhat poorly drained.	Slowly and very slowly permeable, poorly or very poorly drair	d very slowly permeable, somewhat poorly drained.
Moderately	Moderately	Moderately	Moderately	Slowly and	Slowly and
_	2B	3A	38	4A	48
†Drainage group key:					

ned.

§The slope class associated with the soil if it is considered prime (USDA, SCS 1983).

#a, Flood plain; b, Till plain level; c, Till plain rolling; and d, Terrace.

Acreages of mining types in the study areas are given in Table 8. Longwall mining accounted for 1160 acres or 3.1 percent of the total study area in 1985, 1590 acres or 3.6 percent in 1986, and 2,100 acres or 4 percent in 1987. High-extraction retreat mining covered 10,210 acres or 27.1 percent of the total study area in 1985, 15,070 acres or 34.1 percent in 1986, and 17,070 acres or 32.5 percent in 1987.

Weather

Precipitation in the study areas is given in Table 9. Overall, 1985 was a wet year in the study area with about 2 inches of precipitation in excess of normal amounts. March and June were particularly wet with over 2 and 3 inches of excess precipitation, respectively. This excess precipitation was evident in the soil moisture content over the year in the study area (Table 10). Soil moisture reflects the ability of a soil to store water, the amount and intensity of precipitation, the air temperature, solar radiation, and wind. Soil moisture levels were in excess of adequate over the study area from January through June in 1985.

Table 8 Acreages of mine types in the study areas

	Ar	ea (acre	s)	Perc	total	
Mine type	1985	1986	1987	1985	1986	1987
Unmined Unmined within mine Room-and-pillar mine Longwall mine High-extraction retreat mine Unclassified	14,610 3,820 7,170 1,160 10,210	11,750 5,490 9,640 1,590 15,070	13,770 6,030 11,170 2,100 17,070 2,340	38.7 10.1 19.0 3.1 27.0	26.6 12.5 21.8 3.6 34.1	26.2 11.5 21.3 4.0 32.5
Total	37,760	44,160	52,480	100	100	100

Table 9 Precipitation in the study areas†

	Precipitation (inches)								
	Pr	ecipitat	ion	Depa	rture fro	m normal			
Month	1985	1986	1987	1985	1986	1987			
January	1.79	0.51	0.76	-1.59	-2.86	-2.61			
February	4.20	4.39	2.27	1.00	1.37	-0.59			
March	6.71	3.12	2.19	2.32	-1.27	-2.23			
April	3.30	2.96	1.46	-0.80	-1.38	-2.89			
May	4.36	4.91	2.25	-0.80	0.50	-2.16			
June	7.27	2.11	4.42	3.03	-1.81	0.47			
July	1.76	6.50	3.78	-1.87	2.78	-0.24			
August	5.13	3.72	2.05	1.50	0.23	-1.26			
September	2.34	3.14	2.75	-0.80	-0.09	-0.09			

†Source: Illinois Cooperative Crop Reporting Service (1985, 1986, 1987).

Table 10 Soil moisture in the study areas[†]

			Percent	of area	a with s	SO11 MO	isture		
		Short		Ad	dequate		Sı	ırplus	
Month	1985	1986	1987	1985	1986	1987	1985	1986	1987
January	0	5	0	10	78	65	90	17	35
February	0	38	10	0	61	55	100	1	35
March	0	0	10	15	61	80	85	39	10
April	0	25	6	24	64	71	76	11	23
May	0	25	91	46	40	9	54	35	C
June	0	14	22	9	35	71	91	51	7
July	40	20	19	39	70	48	21	10	34
August	18	6	44	64	94	56	18	0	(
September	7	14	70	75	70	30	18	16	Ċ
October	13	0	79	64	60	21	24	40	Ċ

†Source: Illinois Cooperative Crop Reporting Service (1985, 1986, 1987).

Southern Illinois should precede the rest of the state in corn planting because soil temperatures are higher early in the season. In 1985, corn was planted late in the study area due to excessive soil moisture. The late planting delayed the corn's development as indicated by the percent silking in the area relative to the state average (Table 11). By late in the season, however, corn in the study area had essentially caught up with the state average for maturation as indicated by percent of the corn dented (Table 11).

The 1986 growing season was drier and more nearly a "normal" year than 1985. There was about a 2.5-inch deficit in rain over the study area (Table 9). Soil moisture was adequate throughout the year (Table 10), and crop performance was ahead of 1985 (Table 11). The 1987 season was the driest of the three. There was about an 11.8-inch deficit in precipitation over the study area (Table 9). Soil moisture was particularly short in the latter part of the year (Table 10), and the crops matured well ahead of the usual time (Table 11).

Because subsidence-induced effects on crop production are primarily related to changes in soil-water relationships, increased precipitation leads to increased excess water related problems. The 1985 growing season in the study areas was the wettest, so the SIE recorded that year was predictably more extensive than in the other years. Overall, the weather variability was nearly ideal for the three years of the study, a wet year (1985), a dry year (1987), and a "normal" year (1986).

Corn Yields

Subsidence-induced reductions in corn yields are given in Table 12. Appendix C contains the tables generated to test for significance of the yield differences found. Yield-reduction differences were not significant for a given SIE class between mine types or between years. This means that an area rated as moderate SIE class, for example, has the same relative reduction in yield whether it was over longwall or high-extraction retreat mining or whether it was in 1985, 1986, or 1987. In addition, no significant reduction in yield was found for the slight SIE class in any year. However, significant reductions (5% level) in yield were noted with the moderate and severe SIE classes. The moderate class averaged a 43 percent reduction in yield, and the average severe class yield reduction of 95 percent was significantly (5% level) greater.

Table II Crop history in the study areast

		5-yr	9 20 33 71 86 96
_	average		30 72 87 96
lentec	State av	1985 1986 1987	20 40 70 89 95
corn	St	1985	14 28 42 57 77 90 95
Percent of corn dented	rea	1987	40 60 70 97
Percei	Study area	1985 1986 1987	20 40 60 77 85 96
	Sti	1985	12 12 12 18 18 18 18
	e	5-yr	10 84 84
gı	average		95 98 98
silkir	State a	1985 1986 1987	31 66 97
Percent of corn silking	Ś	1985	20 84 94
t of	ea	1987	45 65 97
ercen	Study area	1985 1986 1987	45 70 95 95
<u> </u>	Stu	1985	35 50 75
	ıge	5-yr	10 33 60 78 88 88
ted	average	1987	12 62 90 97 99
n plar	State	1986	29 89 97 997
Percent of corn planted		1985	31 66 93 98 98
ent o	ırea	1987	20 20 70 96
Perc	Study area	1986	15 85 90 90 90
	St	1985	12 28 28 60 68 78
		Week	4 - 1 0 8 4 5 - 1 0 8 4 5 5 1 0 8 4 5 5 1 0 8 4 5 5 1 0 8 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
		Month Week	April May May May May July July July August August August August Sept

†Source: Illinois Cooperative Crop Reporting Service (1985, 1986, 1987).

Table 12 Subsidence-induced reduction of corn yield in the study areas (raw data are given in Appendix B)

		Corn yiel	d reductio	n (%)†
SIE class	1985	1986	1987	Average
Slight		Not sign	ificant‡	
Moderate	52	56	22	43
Severe	95	99	91	95

Tyield reduction was estimated by subtracting the yield within an affected area from an adjacent unaffected control area. This was done at a total of 24 sample pairs in 1985, 55 in 1986, and 48 in 1987.

Subsidence Effects

SIE frequency by soil slope is given in Table 13. The SIE frequency was inversely proportional to slope, i.e., the less the slope, the greater the probability of moderate or severe SIE. No moderate or severe SIE was observed on slopes greater than 12 percent. Of the total moderate plus severe SIE, 53.6 percent was in the 0-1.5 slope class. Less sloping land is more susceptible to SIE for several reasons. Removing water from the surface of nearly level ground is more difficult because: insufficient hydraulic head to move the water; a closer proximity to the water table on low level ground and on broad level divides; and a greater probability that closed depressions will form on nearly level ground.

[‡]For each year, the difference in yield reduction between moderate and severe classes was significant. No significant reduction in yield was found for the slight class nor was there a significant (5% level) difference in yield reduction between mine types or between years.

Table 13 Frequency of SIE by soil slope class

									Sol	Soil slope class (%)	pe cla	188 (%									,
	0	0-1.5		1.	1.5-4			4-7		7	7-12		12-18	18		> 18	8		Á	Average	a
SIE class 1985 1986 1987 1985 1986 1987 1985 1986 1987	1985	1986	1987	1985 1	986 1	987	1985 1	986 19		1985 1986 1987 1985 1986 1987	986 15	187	985 19	186 15		1985 1986 1987	186 19		985	9861	1985 1986 1987 All
									S	SIE frequency (%)	ouenc	(%) K									
None	91.7	92.1	88.2	91.7 92.1 88.2 95.0 93.4 91.3 96.3	93.4 9	91.3		95.0 5	3.4	98.3	36.1 9	6.2	96.69	5.4 9	5.8	100 8	3.3 8	9 9	5.2 6	3.9	95.0 93.4 98.3 96.1 96.2 96.6 95.4 95.8 100 83.3 83.3 95.2 93.9 91.7 93.4
Slight	4.0	4.0	8.	4.0 4.0 8.8 2.6 4.3 7.7	4.3	7.7	2.5	4.4 5.7	5.7	1.5 3.3 3.4	3.3	3.4	3.4 4.6 4.2	4.6	4.2	0 1	6.7 1	6.7	2.7	4.1	0 16.7 16.7 2.7 4.1 6.8 4.5
Moderate 3.9 3.1 2.3	e 3.9	3.1	2.3		2.3 2.2 0.9	6.0	1.1	0.6 0.8		0.2 0.6 0.4	9.0		0	0	0	0	0	0	1.9	1.8	1.9 1.8 1.2 1.6
Severe	0.4	0.8	0.4 0.8 0.7		0.2 0.1 0.1	0.1	0.2	0	0.1	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2 0.2 0.3 0.2
Sum of moderate and severe averages	nd rages	3.7			1.9			0.9			0.4			0			0	i		1.9	

A chi-square test was used to check that the difference in SIE frequency over LW and HER mines was not due to an unequal distribution of slopes. Table 14 gives the distribution of slopes by mine type. For the 1986 data, no interaction was noted in slope by mine type. For the 1985 and 1987 data, a small interaction was noted. Longwall mines were relatively more prevalent on more nearly level soils in those years than were HER mines. This effect was significant at the 5% level but not at the 1% level, meaning that overall, the difference in SIE frequency between the two mine types is a real difference and is not due primarily to slope effects.

Frequency of SIE by soil type is given in Table 15. The inverse relationship between slope and SIE frequency is seen in the low SIE frequencies in the more sloping soils. For example, Hickory (soil 14) and Hickory-Ava Complex (soil 814), which are strongly sloping soils, have only a small amount of moderate or severe SIE.

Another factor that influences the frequency of SIE on soils is the distribution of soils and mines. Table 16 gives the frequency of soils over planned subsidence mining. Richview soil (soil 4), which is fairly common (Table 6) in the study area, does not occur over LW mines and accounts for about 3 percent of the soil over HER mines. It is not surprising, then, that little moderate or severe SIE was found on this soil. The most common soil over both mine types was Bluford (soil 13). However, Bluford is under-represented in the moderate and severe SIE classes with only 1.5 percent of its area in those classes overall (Table 15). This discrepancy could be due to a distribution of slopes such that the undermined areas are on sloping land and the nearly level areas are in unmined areas. But when slopes are restricted to <1.5 percent, Bluford is still the second most common soil (Table 6). Another possibility is that these soils do not respond as unfavorably to SIE as other soils do. A third, and perhaps most important reason, is that Bluford soils do not occur in extensive level areas as does Cisne (soil 2), which is the most SIE-prone soil. Table 7 gives the soil properties that influence soil subsidence sensitivity.

In general, the more extensive the soil, the higher the probability that it will be undermined. And the more nearly level the soil and the more restricted the soil drainage, the greater the impact of subsidence. For the specific soils of the study area, a sensitivity rating was developed (Tables 17 and 18). Figure 2 shows the distribution of soils with sensitivity class 1 and 2. These ratings are a preliminary estimate and are based upon the findings of this study.

Table 14 Frequency of soil slopes over planned subsidence type mines

			Slope (%)/year)/year						
	0-1.5	1.5-4	4-7	7-12	> 12	2			Total	
type		1985 1986 1987 Avg 1985 1986 1987 Avg	1985 1986 1987 Avg 1985 1986 1987 Avg 1985 1986 1987 Avg 1985 1986 1987 Avg	1985 1986 1987 Avg	1985 1986	1987	4vg 1	985 198	36 1987	Avg
			Frequency (%)	(%) 6						
LW	34.5 32.7 36.2 34.5	34.5 32.7 36.2 34.5 26.7 29.6 28.1 28.1 30.2 30.2 26.7 29.0 8.6 7.5 9.0 8.4 0 0 0 0 10.2 9.5 11.0 10.2	30.2 30.2 26.7 29.0	8.6 7.5 9.0 8.4	0 0	0	0	0.2 9	.5 11.0	10.2
HER		25.2 28.7 27.5 27.1 30.5 29.4 29.2 29.7 26.2 26.5 26.9 26.5 17.4 14.9 15.8 16.0 0.8 0.5 0.6 0.6 89.8 90.5 89.0 89.8	26.2 26.5 26.9 26.5	17.4 14.9 15.8 16.0	0.8 0.5	9.0	0.68	9.8 90	.5 89.0	89.8
Total	Total 26.1 29.1 28.5 27.9 30.1 29.4 29.1 29.5 26.0	30.1 29.4 29.1 29.5	26.6 26.8 26.9 26.8	6 26.8 26.9 26.8 16.5 14.2 15.0 15.2 0.7 0.5 0.5 0.6 100 100 100	0.7 0.5	0.5	9.0	100	00 100	100

Table 15 Frequency of SIE (%) by soil type

Soil type [†]	Sum of moderate and severe SIE class
2	5.6
3	3.0
4	0.7
5	8.3
8	0
12	2.5
13	1.5
14	1.2
72	2.0
84	10
108	10
109	2
382	5.3
814	0.2

[†]See Table 6 for names and slopes associated with soil type numbers.

Table 16 Frequency of soil types over planned subsidence mining

Wine								Soil	type	1				
Mine type	2	3	4	5	8	12	13	14	72	84	108	109	382	814
						Un	restr	ricted	slop	е				
LW HER Both	14 7 8	10 4 5	0 3 2	0 .1 .1	0 .1 .1	1 2 2	57 55 56	9 18 17	3 3 3	.2 .5	1 2 1	0 .2 .1	3 2 2	0 3 3
							\$10	pe <	4%					
LW HER Both	16 12 12	10 7 7	0 4 3	0 0 0	0 0 0	2 3 3	53 51 51	0 6 6	4 5 5	.4	3 4 4	0 . 4 . 4	6 3 3	0 0 0
							Slo	pe <	2%					
LW HER Both	44 30 37	0 8 7	0 0 0	0 0 0	0 0 0	2 3 3	33 33 33	0 2 2	10 10 10	0 .7 .7	2 6 6	0 .2 .1	9 6 7	0 0 0

[†]See Table 6 for names and slopes associated with soil type numbers.

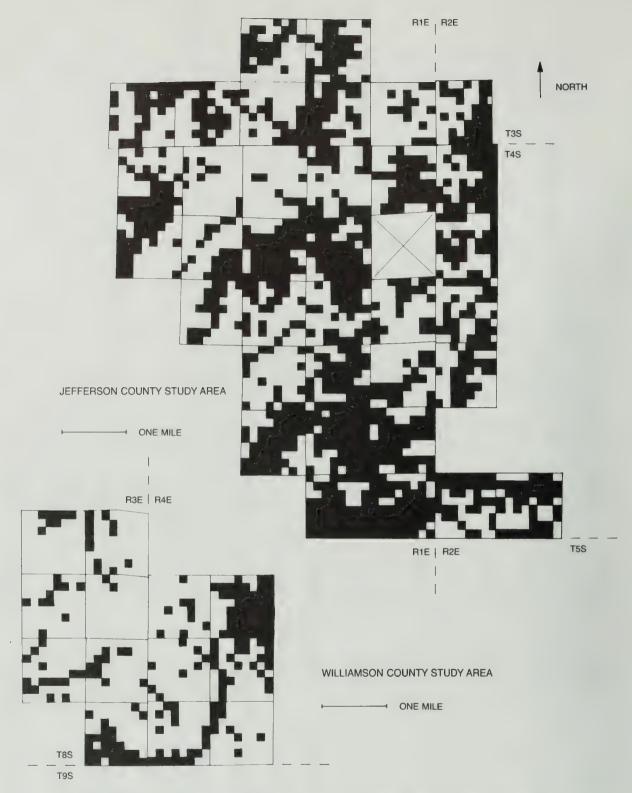


Figure 2 Areas sensitive to subsidence-induced effects are indicated in black. See Figure 1 for locations of study areas. The section marked X was not included in the study area.

21

Figure 2 (continued)

Table 17 Sensitivity of study area soils to SIE

Sensitivity class†	Soils (slope %)
Highly sensitive	2; 12 (<2%); 84 (<2%); 109 (<2%); 3 (<2%); 13 (<2%); 382; 108
Moderately sensitive	12 (2-4%); 84 (2-4%); 3 (2-4%); 4 (<2%); 13 (2-4%); 109 (>2%); 72; 14 (<2%)
Somewhat sensitive	12 (>4%); 84 (>4%); 3 (>4%);4 2-4%); 5; 13 (4-7%); 814 (<4%); 14 (2-4%)
Essentially insensitive	4 (>4%); 8; 13 (>7%); 814 (>4%); 14

†Assigned rating of those soils as described in the study area. See Table 6 for names associated with soil numbers.

Table 18 Sensitivity of study area prime agricultural soils to SIE

Soil	(slope)	Sensitivity class†
2	Cisne	1
3	Hoyleton (<2%)	1
3	Hoyleton (2-4%)	2
3	Hoyleton (4-7%)	3
4	Richview (<2%)	2
4	Richview (2-4%)	3
13		1
	Bluford (2-4%)	2
14		2
14	Ava (2-4%)	3
72		2
108		1
109	Racoon (<2%)	ī
109	Racoon (2-4%)	2
382	Belknap	1

†Sensitivity class names: 1, highly sensitive; 2, moderately sensitive; 3, somewhat sensitive

Impact of Mining Methods

This portion of the discussion is limited to longwall (LW) and high-extraction retreat (HER) type mines, which are the mines of primary interest in this study. Subsidence effects of LW mining are much more evident than those of HER mining. Individual subsided LW panels are more clearly demarcated than HER panels, especially on level divides or in bottoms. The lines of coal pillars left between LW panels often stand as noticeable ridges between panels. These between-panel pillars are usually removed in HER mining. However,

when these pillars are partially removed or not removed, prominent ridges may remain between blocks of panels. Where the pillars are removed, a much larger area subsides and the edges of the subsided area are less well defined. In addition, HER mine borders often follow man-made features, such as fence rows, railroads, or highways. Furthermore, they are difficult to distinguish on rolling topography, and HER wet areas tend to be more randomly distributed and less well demarcated than the LW wet areas.

Both types of mining make previously wet soils wetter; for example, a subsided panel can cause ponding by changing the local base level of a stream. This impact is greatest in areas of subtle topography. The orientation of LW panels and the edges of HER mines may be important in determining the severity of the subsidence effects, although the data from this study are inconclusive on this point. Table 19 gives the frequency of SIE classes by panel orientation, and Table 20 gives the frequency of panel orientation by mine type. When expressed on a weighted average distribution basis, panel orientation class 2 (panels oriented perpendicular to the slope) has the highest frequency of SIE of the sloping areas with HER mines. But with LW mines, panel orientation class 1 (panels parallel to the slope) has the highest SIE frequency. With both mine types, panel orientation class 3 (panels on nearly level slope) had the greatest SIE frequency, again indicating the impact of subsidence on nearly level ground.

Subsidence effects also vary with weather conditions. The 1985 growing season was particularly rainy in southern Illinois (Table 9), and the effects observed may be representative of a "wet" year. The 1986 growing season had very favorable soil moisture (Table 10) and may represent a "normal" year. The 1987 season was rather dry. In an unusually dry year, crops may respond favorably to increased soil wetness in some cases. In addition, crops initially affected by early season excessive wetness may show no ill effects later on (Table 11).

This study did not address some other possible consequences of subsidence. For example, fields with SIE may have been planted later or portions thereof replanted due to wetness, reducing yield and increasing management costs. These variables were controlled by using a large number of samples spread out over the entire research area and by pairing every sample with a control from the same field.

A summary of the subsidence-affected areas by mine type is given in Table 21. The results in Table 21 reflect all effects observed in the mine type areas in the study year and represent all the factors that influence subsidence, such as weather, time since subsidence, and previous mitigation efforts. In general, the extent of a SIE class was inversely related to its severity, and a significantly (5%) higher frequency of SIE classes 2, 3, and 4 was recorded for the LW mine type than for the HER type. SIE class 3 and 4 were significantly (5%) greater in 1985 than in the other years for both mine types, as expected in that wet year. A chi-square test revealed that the difference between mine types was significant. These results, coupled with the yield estimates, indicate that on a per-acre mined basis, the LW method had a greater negative impact on agriculture than HER.

Table 19 Frequency of SIE by panel orientation

							Pan	el ori	Panel orientation	ont						
i.			1			2				3				44	-	
SIE	1985	1986	1987	Avg	1985	1986	1987	Avg	1985	1986	1987	Avg	1985	1986	1987	Avg
								SIE Fr	SIE Frequency (%)	(%) k						
Longwall																
None	72.7	72.7 67.6 59.3	59.3	5	84.4	84.4 78.6 71.2	71.2	000	40.0	67.3	52.9	0				
Slight	13.6	13.6 27.9 33.3	33.3	91.5	12.5	19.0	23.7	30.6	42.5	24.5	40.0	6.60				
Moderate	11.4	1.5	6.2	C	3.1	2.4	5.1	0	12.5	2.0	4.3	-				
Severe	2.3	2.9	1.2	c. 0	0	0	0	0.0	5.0	6.1	2.9	1.01				
Total	100	100	100	100	100	100	100	100	100	100	100	100				
High-extraction retreat	ction 1	retrea	ىد													
None	93.2	93.2 93.6 92.2	92.2	0	91.7	91.1	9.68	7	87.6	89.8	86.7	7	94.6	92.5	91.3	07 E
Slight	4.6	4.2	6.3	98.0	3.2	6.1	7.6	6.76	3.2	4.5	8.1	7.06	3.5	3.1	7.6	5:16
Moderate	1.9	2.3	1.2	"	4.5	2.8	0.4	, c	8.8	5.0	4.0	, c	2.0	3.8	1.2	7.
Severe	0.2	0	0.3	0.2	9.0	0	0.4	6.3	0.4	8.0	1.2		0	9.0	0	;
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

fpanel orientation classes: 1, parallel to regional slope; 2, perpendicular to regional slope; 3, nearly level slope; 4, complex slope, rolling ground.

‡There were no panel 4 longwall mines.

Table 20 Frequency of panel orientations

					Pa	nel or	ientati	on [†]				
		1			2			3			4	
Mine type	1985	1986	1987	1985	1986	1987	1985	1986	1987	1985	1986	1987
						Freque	ency (%)				
LW	37.9	42.8	38.6	27.6	26.4	28.1	34.5	30.8	33.3	0	0	0
Average		39.8			27.4			32.9			0	
HER	40.4	38.1	38.9	15.4	14.2	15.8	24.5	26.5	25.2	19.8	21.2	20.2
Average		39.1			15.1			25.4			20.4	

[†]Panel orientation classes: 1, parallel to regional slope; 2, perpendicular to regional slope; 3, nearly level slope; 4, complex slope, rolling ground.

Table 21 Summary of subsidence-affected areas, 1985, 1986, 1987

				Min	ing type			
		Longwa	11		High-	extract	ion retr	eat
SIE class	1985	1986	1987	Avg	1985	1986	1987	Avg
			Perc	ent tot	al mine t	type ar	eat	
None Slight Moderate Severe	64.6 23.3 9.5 2.6	24.5 1.9	65.5 32.9 5.2 1.4	64.7 27.8 5.2 2.3	91.9 3.8 4.0 0.3	92.0 4.3 3.4 0.3	7.5	91.2 5.5 2.9 0.4

[†]Within each SIE class, differences between mining types were found to be significant at the 5% level. No significant difference was found between years for HER type mining. A significant difference was found between years for LW type mining.

The weighted average reduction in yield per acre is given in Table 22. The overall reduction in yield was 4.7 percent for LW mines and 1.8 percent for the HER mines. Because the weather over the three years of the study included one wet, one dry, and one "normal" year these results should be representative. Compared with similar unmined

areas, corn yield was reduced by LW mining by 4.7 percent and by HER mining by 1.8 percent. These estimates include only the land directly over the mine panels and do not reflect replanting costs, harvest losses, or other costs.

Table 22 Overall reduction of corn yield, 1985, 1986, and 1987

	C	orn yield	reduction	(%)†
Mine type	1985	1986	1987	Avg
Longwall	7.4	4.2	2.4	4.7
High-extraction retreat	2.4	2.2	0.9	1.8

†Weighted average reduction in yield.

CONCLUSIONS AND RECOMMENDATIONS

The results of this study indicate that the overall impact of subsidence on crop production in terms of yield is slight. Although the impact on a single field or to an individual farmer may be great, when expressed on a total mine area, the maximum yield reduction determined was less than 10 percent. The results of this study indicate that longwall (LW) mining has significantly more impact on crop production than high-extraction retreat (HER) mining, which may be due to several factors. Individual LW panels tend to be more evident on the landscape. Unlike HER panels, LW panels are well defined by a line of coal pillars left between the panels. operation removes as many of these between-panel pillars as possible, thus eliminating the pronounced high divides on the ground surface between panels and consequently causing subsidence of a larger, less well-defined area. These large areas are less susceptible to ponding. In addition, the average maximum amount of subsidence over HER is about 1 to 1.5 ft less than with LW (Bauer and Hunt, 1982).

Another factor that can influence the impact of subsidence is panel orientation. Data from this study were not sufficient to find a statistically significant relationship. However, it was generally observed that mine panel edges that run perpendicular to natural drainageways tend to act as dams whereas those that run parallel with drainageways have less impact.

Recommendations to minimize the impact of subsidence on crop production are as follows: i) minimize the relative length of mine panel perimeters and the number of between-panel pillars by keeping the panels and the subsided areas as large as possible, and ii) orient

panels so that edges run parallel to natural drains. These recommendations are most important in areas of subtle topography, low relief, and high water tables.

These results are based upon the conditions in 1985, 1986 and 1987. The results reflect not only the impact of subsidence but also the mitigation efforts in place at the time of the study. They do not address the long-term possibilities for mitigation or the permanence of the yield reductions and mitigation effects. Most importantly, the results reflect the weather during the three growing seasons. Weather variability was ideal during the study. The 1985 season was wet, 1987 was dry, and 1986 was a "normal" year. Subsidence was near the average for the three years in 1986, greatest in 1985, and least in 1987.

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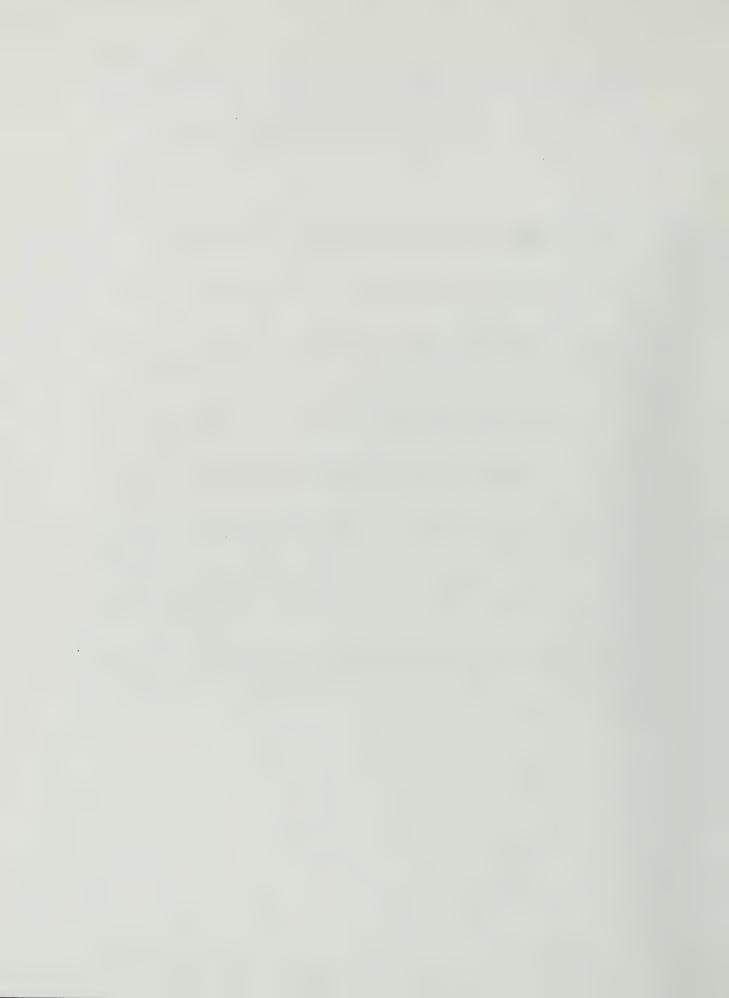
LITERATURE CITED

- Bauer, R. A., and S. R. Hunt. 1982. Profile, strain, and the time characteristics of subsidence from coal mining in Illinois. Proceedings of workshop on surface subsidence due to underground mining. pp. 207-218.
- Darmody, R. G., J. S. Steiner, I. J. Jansen, and S. G. Carmer. 1988.

 Microcomputer spreadsheets and point sampling of maps and aerial photographs in an environmental impact study. Journal of Environmental Quality (submitted).
- DeMaris, P. J., and R. A. Bauer. 1983. Identification of mine subsidence on aerial photographs in central Illinois. Illinois State Geological Survey. Contract/Grant Report 1983-7.
- Drablos, C. J., and R. C. Moe. 1984. Illinois drainage guide.
 Illinois Cooperative Extension Service, Circular 1226.

- Fehrenbacher, J. B., and R. T. Odell. 1959. Williamson County Soils. Soil Report 79. Univ. of IL, Ag. Exp. Stn.
- Fehrenbacher, J. B., J. D. Alexander, I. J. Jansen, R. G. Darmody, R. A. Pope, and M. A. Flock. 1984. Soils of Illinois. Illinois Agric. Exp. Stn. Bull. 778.
- Flowers, A. E. 1957. Plans for long, productive life. Coal Age. 62:76-85.
- Guither, H. D., J. Hines, and R. Bauer. 1985. The economic effects of underground mining upon land used for Illinois agriculture. Doc. No. 85/01. Illinois Dept of Energy and Natural Resources.
- Hunt, S. R. 1980. Surface subsidence due to coal mining in Illinois. Ph.D. thesis, Department of Geology, University of Illinois at Urbana-Champaign.
- Illinois Cooperative Crop Reporting Service. 1985, 1986, and 1987.
 Illinois Weather & Crops. Statistical Reporting Service, USDA,
 Springfield, Illinois.
- McSweeney, K., and I. J. Jansen. 1984. Soil structure and associated rooting behavior in minesoils. Soil Sci. Soc. Amer. Jour. 48:607-612.
- Norton, E. A. 1923. Soils of Jefferson County, Illinois (unpublished).
- U.S.D.A., S.C.S. (1983). Important farmlands, correlated mapping units in Illinois that qualify (unpublished).
- Wascher, H., R. S. Smith, and L. H. Smith. 1938. Vermilion County Soils. Univ. of Ill., Ag. Exp. Stn. Soil Rpt. No. 62.
- Wheeler, H. C. 1913. Soils of Franklin County, Illinois (unpublished).
- Young, L. E. 1916. Surface subsidence in Illinois resulting from coal mining. Illinois State Geological Survey. Cooperative Coal Mining Series Bull. 17.

APPENDIX A. REMOTE SENSING RAW DATA



ILLINOIS MINE SUBSIDENCE RESEARCH PROGRAM 1985-1987 DATA

Lω																																																		
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ILLINOIS HINE SUBSIDENCE RESEARCH PROGRAM 1985-1987 DATA

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ILLINOIS MINE SUBSIDENCE RESEARCH PROGRAM 1985-1987 DATA

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ILLINOIS MINE SUBSIDENCE RESEARCH PROGRAM 1985-1987 DATA

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ILLINOIS MINE SUBSIDENCE RESEARCH PROGRAM 1985-1987 DATA

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ILLINUIS MINE SUBSIDENCE RESEARCH PROGRAM 1985-1987 DATA

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ILLINOIS MINE SUBSIDENCE RESERRCH PROGRAM 1985-1987 DATA

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ILLINDIS HINE SUBSIDENCE RESEARCH PROGRAM 1985-1987 DATA

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ILLINOIS MINE SUBSIDENCE RESEARCH PROGRAM 1985-1987 DATA

Fig. 25 France Fig. 25 F	Fig. 25 Striker Delta Fig. 25 Strike		LOCATION	1			LANDUSE	E IS		SUBSI	SUBSIDENCE		MINE	교사		PANEL		SOIL	SLOPE
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ILLINOIS HINE SUBSIDENCE RESEARCH PROGRAM 1985-1987 DATA

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ILLINOIS MINE SUBSIDENCE RESERRCH PROGRAM 1985-1987 DATA

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ILLINOIS HIME SUBSIDENCE RESERRCH PROGRAM 1985-1987 DATA

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ILLINOIS MINE SUBSIDENCE RESEARCH PROGRAM 1985-1987 DATA

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ILLINOIS MINE SUBSIDENCE RESERRCH PROGRAM 1995-1987 DATA

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ILLINOIS MINE SUBSIDENCE RESERRCH PROGRAM 1985-1987 DATA

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ILLINOIS MINE SUBSIDENCE RESEARCH PROGRAM 1985-1987 DATA

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ILLINDIS HINE SUBSIDENCE RESEARCH PROGRAM 1985-1987 DATA

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ILLINOIS MINE SUBSIDENCE RESERRCH PROGRAM 1985-1987 DATA

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ILLINOIS MIME SUBSIDENCE RESEARCH PROGRAM 1985-1987 DATA

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4 CORNINH 3 O 36	- 1	CURICH	30	5 C	<b>⊷</b>	<b></b> , .	н.	<b>,</b>	<b>-</b> •	<b>→</b>	-1	<b>-4</b> .	н.	<u>"</u>	n I	n	382	rd (
4 CORNINH 30 38	- 1	CONTRACT	묶	HZ.	-4	p=4 .	н		p-4	u-d	<b>→</b>		r-1	LT:	ഹ	ro.	<u>v</u>	w
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CORENTH   30   35   1   1   1   1   1   2   2   2   2   5   5   5   5   5   5	N 4	CORINTH	30	30	<b>#</b> 4	1	<b>-</b> 4	<b>+</b> 4	7	N	m	ורו	m	Ŋ	Ŋ	w	814	10
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4 CORINTH 30 346 4 CORINTH 30 347 1 1 1 1 1 1 1 1 5 5 5 5 8 814 4 CORINTH 30 4 6 CORINTH 30 4 6 CORINTH 30 4 6 CORINTH 30 5 6 6 6 6 7 1 1 1 1 1 1 1 1 1 5 5 5 5 5 8 814 4 CORINTH 30 5 6 6 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		CORINTH	20	L.	4	g-4	p-4	<b>+-4</b>	<b>-</b>	'n	m	ריו	m	v	ហ	ഗ	814	10
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A CORINTH	Z	CORINTH	30	E M		s-4			<b>~</b>	ş\$	-4	e~l	<b>⊶</b> 1	L/I	S.	s o	332	<del>-</del> 4
CORINTH   30		CORINTH	30	4. E.	r\J	2	0	<b></b> 4		<b>-</b> 4	S	r)	ហ	m	m	m	385	<del>-1</del>
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4 CORINTH 30 4E 1 1 1 1 1 1 1 5 5 5 5 5 14 4 CORINTH 30 4F 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4	CORINTH	30	9	m	m	m	**4		<b>-4</b>	ന	רייו	m	w	vn	'n	0	₩.
4 CORINTH 30 4F 1 1 1 1 1 1 1 1 1 1 3 3 3 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6	4	CORINTH	000	护	-4	-1	-4	_	-4		2	~	N	ഗ	ഗ	L/Y	14	m
4   CORINTH   30   46   1   1   1   1   1   1   1   1   5   5	Ċ	CORINTH	30	14.	-4	9~4	<b>-</b>	2	-1	•••	~	N	~	v	ເກ	S	614	10
4   CORINTH   30   54   1   1   1   1   1   1   1   5   5   5	4	CORINTH	30	<b>4</b> 0	<b>-</b> 4	-4		-4	<b>-</b>	-1			-	'n	ທ	r)	382	-1
4         CORINTH         30         5A         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         3         3         3         5         5         5         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9	NT A	CORINTH	30	# <del>4</del>	-	pref	-	-1	_	1	-4	<b>5-4</b>	-	ທ	Ŋ	ហ	814	10
4   CORINTH   30   58   1   1   1   1   1   3   3   3   5   5   5   14     4   CORINTH   30   55   1   1   1   1   1   2   2   2   2   5   5   5   14     5   CORINTH   30   55   2   2   2   1   1   1   1   1   2   5   5   5   5   5     6   CORINTH   30   55   5   5   5   5   5   5   5     7   CORINTH   30   56   5   5   5   5   5   5     8   8   1   1   1   1   1   1   5   5   5   5	Ť	CORINTH	30	800		-4	-	-4	н	-4	2	7	2	S	w	ഗ	814	10
4         CORINTH         30         5C         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1	A TK	CORINTE	30	SB	-4	-4		-4	<b>-</b>	-1	m	m	m	ເກ	ທ	ഗ	14	e
4         CORINTH         30         50         1         1         1         1         1         2         2         2         2         2         2         2         2         2         2         2         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3	Ċ	CORINTH	30	ಬ್ಬ	•		-4	-4	-4	I	2	2	2	S	ហ	Ŋ	14	m
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4 CORINTH 30 SF 1 1 1 1 1 2 2 2 5 5 5 814 4 CORINTH 30 SG 2 2 2 1 1 1 1 1 5 5 5 5 14 5 CORINTH 30 SG 2 2 2 1 1 1 1 1 1 5 5 5 5 14 5 CORINTH 30 SG 1 1 1 1 1 1 5 5 5 5 14 6 CORINTH 30 SG 1 1 1 1 1 1 1 5 5 5 5 5 5 6 14 7 CORINTH 30 SG 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 12	CORINTH	30	SE	2	2	2	***	7	-1	m	٣	m	(V)	ທ	'n	382	H
4   CORINTH   30   56   2   2   2   1   1   1   1   1   5   5   5   814   1   4   CORINTH   30   54   2   2   2   1   1   1   1   1   5   5   5   14   1   4   CORINTH   30   66   1   1   1   1   1   2   2   2   2   2	Ė	CORINTH	30	I.	+1			+-4	9-4	-4	2	2	2	Ŋ	ហ	w	814	10
T 4 CORINTH         30         SH         2         2         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         2         2         2         2         2         2         2         2         5         5         5         8         8         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         <	4 1	CORINTH	30	56	N	2	(1	•••	•	-4	-4	•4		S	S	ഗ	814	10
4 CORINTH 30 6A   1   1   1   1   5 5 5 2 2 2 2 2 2 14     4 CORINTH 30 6C   1   1   1   1   2 2 2 2 2 5 5 5 1     4 CORINTH 30 6C 2 2 2 1   1   1   1   1   2   2 2 2 2 5 1     5 CORINTH 30 6C 2 2 2 2 2 5 5 5 1   1   1   1     6 CORINTH 30 6C 1   1   1   1   2 2 2 2 5 5 5 1     7 CORINTH 30 6C 1   1   1   1   1   2   2 2 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5	A P	CORINTH	30	SH	2	7	2				9-4	1		ın	ហ	ហ	14	g
F 4 CORINTH 30 68 1 1 1 1 1 2 2 2 2 5 5 5 814 F 4 CORINTH 30 6C 1 1 1 1 1 2 2 2 2 5 5 5 814 F 4 CORINTH 30 6D 2 2 2 1 1 1 5 5 5 1 1 1 814 F 4 CORINTH 30 6E 1 1 1 1 2 2 2 5 5 5 814	NT 4	CORINTH	30	6.8	p=4	0-4			-	-1	Ŋ	bγ	ហ	2	2	~	4	m
F 4 CORINTH 30 6C 1 1 1 1 1 2 2 2 2 2 5 5 814 1 1 4 CORINTH 30 6D 2 2 2 1 1 1 1 814 1 1 1 1 5 5 5 1 1 1 814 1 1 1 1 2 2 2 5 5 5 814 1 1 1 1 1 1 2 2 2 5 5 5 814 1 1 1 1 1 1 2 2 2 5 5 5 814 1 1 1 1 1 2 2 2 2 5 5 5 814 1 1 1 1 1 1 2 2 2 2 5 5 5 814 1 1 1 1 1 1 2 2 2 2 5 5 5 814 1 1 1 1 1 1 2 2 2 2 2 5 5 5 814 1 1 1 1 1 1 1 2 2 2 2 2 5 5 5 814 1 1 1 1 1 1 1 2 2 2 2 2 5 5 5 814 1 1 1 1 1 1 1 2 2 2 2 2 5 5 5 814 1 1 1 1 1 1 1 2 2 2 2 2 5 5 5 814 1 1 1 1 1 1 1 1 2 2 2 2 2 5 5 5 814 1 1 1 1 1 1 1 1 1 2 2 2 2 2 5 5 5 814 1 1 1 1 1 1 1 1 1 2 2 2 2 2 3 5 5 814 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A TH	CORINTH	30	80	1		<b>=</b>	-	7		2	2	N	ហ	w	ហ	814	10
74 CORINTH 30 60 2 2 2 1 1 1 5 5 5 1 1 1 814	NT A	CORINTH	30	9	-4	-			-4	-4	2	2	~	Ŋ	w	ហ	814	01
74 CORINTH 30 6E 1 1 1 1 1 2 2 2 5 5 5 914	NT 4	CORINTH	30	60	cı	2	~	+	-4		w	Ŋ	<b>L</b> O	1	***	7	814	10
	4 LN	CORINTH	30	38	-	1	-7	-1	-4	-	2	2	2	S	ĸ	ហ	814	10

ILLINOIS MINE SUBSIDENCE RESERRCH PROGRAM 1985-1987 DATA

	LOCATION				LANDUSE			SUBSI DENCE	DENCE		HINE I	TYPE		PAMEL		301L	SLOPE
HINE NAME	TOHNSHIP	SECTION G	RIO POINT	1985	1986	1987	1985	1986	1987	1985	1986	1987	1985	1986	1987	85-87	35-87
ORIENT	CORINTH	30	9	-	-		-	-	-	m	m	m	6	6	6	4.	
ORIENT 4	CORINTH	30	93	p=4		-4		-4		-		) <del>-</del> -1	w	L/I	·M	4	m
FNJ	CORINTH	30	H9	-1	-	-	<b>⊷</b>	y-4	<b>#</b> 4	-	<b>~</b> 4	-1	Ŋ	S	w	4	'n
L L L	CORINTH	30	R.	-	<b>-4</b>	<b>↔</b>	2	cı	N	ന	m	m	Ŋ	ທ	ഗ	382	
	CORINTH	30	78	<b>₽</b>		_	**4	-7	-1	S	ษา	ഗ	<b>#</b> 4	H		21.00	10
EX.	CORINTH	30	75	N	2	۲,	***		<b>-4</b>	ហ	ហ	ហ	<b>-</b> 4	<b>↔</b>	₩	814	10
	CORINTH	30	70	<b>-</b> 4	H		⊶		p=0	w	មា	n	<b>⊷</b> 4	-	-	814	10
	CORINTH	30	75	m	m	m	<b>-</b>		44	m	ന	m	ι'n	S	N	٥	-4
	CORINTH	30	le.	E	m	ന	-	-4	<b>-</b> 4	E	m	m	S	n	S	O	-4
L K	CURINTE	30	70	4.	4	4.	-4	<b>=</b> 4	-4	m	m	m	ហ	ហ	ഗ	4	m
	CORINTE	0 <u>0</u>	T.	-	<b>~</b>		<b>~</b> ∗	₩	⊶		<b>≠</b> 4	-1	ហ	K)	ហ	14	9
LX.	CORTHIN	30	e: E:	r-l	w-4	-	<del>-</del> 4	₩	+-4	m	ന	ന	w	ហ	Ŋ	₹	m
노	CORINTH	30	88		-4	⊷1	2	2	-4	ın	ភេ	Ŋ	m	m	m	382	<b>-</b>
EX.	CORINAR	30	9C	2	2	7	<b>-</b> 4	-4	erd	ഗ	ഗ	ហ	4.	ব	4.	814	10
上記	CORINTH	30	80	N	2	C)	-	-	<b>~4</b>	'n	Ŋ	vo	2	2	N	814	10
ORIENT 4	CORINTH	30	e U	m	m	ന	<b>→</b>	y-4	1	m	ıπ	m	ın	ហ	ហ	O	-
눈	CORINTH	30	9.5	p=4		-1		H	p=4	2	N	~	LO)	ហ	UT)	4-1	m
ORIENT 4	CORINTH	30	96	N	N	2		-4	-4	m	ന	m	S	ເກ	ហ	4	10
노	CORINTH	30	HØ.	<b>H</b>	-	-	_	H	<del>-</del> -1	<b>.</b>	-	-4	ษา	เก	Ŋ	14	m
FNI	CORINTH	₽ F)	H1	₩	<b>-</b>	-	-	<b>⊷</b>	<b>~</b> 1	N	N	2	S	m	ហ	4	10
보	CORINTH	(C)	13		₩	н		₩		ហ	L/)	w	73	C)	N	4	m
ORIENT 4	CORINTH	m T	10	СJ	N	~	g0	-	-4	K)	S	ហ	m	m	m	382	Ħ
EXT	CORINTH	J.	10	N	~	נט	~		-1	ľ	m	m	ហ	S	ហ	382	p=4
LY.	CORINTH	31	7	N	ıv,	2	<b>~</b>		-4	m	m	m	S	ι'n	v	4	m
	CORINTH	31	L.	pref	₩	-4	₩	₩	ıщ	m	m	m	ษา	ഗ	ស	4	m
ENT	CORINTH	31	16	prof.	<b>↔</b>	-	₩	₩	<del>-</del> d	<b>\$</b> -4	₩	₩4	ហ	ഗ	ហ	4.	m
드	CORINTH	31	H	~	N	61	⊷1	p=4	⊷	-4	₽ď	Н	w	ഗ	S	4-	15
LNU	CORINTH	31	2.H	H	ьч			-4	+1	ന	m	m	ហ	Ŋ	ហ	4	15
LXU	CORINTH	1 E	29	C)	N	7		-4	-4	m	ሶን	m	S	ເກ	ហ	382	-4
に に に に	CONTRACT	a1 E	20	₩	₩	<b>⊷</b>			+4	2	7	€3	S	S	LO.	14	15
	CORINTH	⊷† (P) :	20	rJ	r ₂	C)	⊶		H	m	m	m	ហ	S	Ŀγ	382	<b>-</b> -1
- I	CORINTH	 m	25	N	N	N	<b>↔</b>	<b>⊷</b> 1	<b>-</b> 4	CJ	2	7	L/Y	L/J	Ŋ	14	10
ا <u>ا</u>	CORINTH	⊷ r m) i	2F	n	N	(c)	-4	<del>-</del> -4	-4	-	-	-4	S	ស	n	<u>+</u>	10
	CORINTH	m i	20	m ·	(T)	m ·	w-4	<b>~</b>	φd	<b></b> 4		7	ហ	S.	ហ	0	<b>e</b> -4 ;
E 24	CORENTH	m i	5.5	N.	η,	ο,	⊶ ,	₩,	<b>-</b> 4 ·	<b>⊶</b> (	₩ (	<b>⊢</b> (	<b>ا</b> دا	ഗ	<b>ا</b> د	g- ;	m (
2 1	E 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	¬ ,	T (	~l ·	<b>⊢</b> 4 :	rd i	<b>,</b>	<b>→</b> .	-4 ·	n	ភ	n (	N 1	N I	N I	B (	10
DETERMINE A	2 12 10 00	T) (1	3 0	-4 +	rd o	-1 ·	4 ÷	⊣ •	<b>⊢</b> 1 •	N n	N n	N n	n L	ກເ	ភម	C	ים פי
1 k		- ·	ט מ	⊣ (	-4 (	-1 (	-4 ·	<b>→</b> 1	-1 -	n (	n a	י מ	חנ	nı	nı	L 7 0 C	) ·
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- k	CONTRACT	(n) (	LL (	N.	ru -	N.	⊶ .	e=# :	<b>-</b> 4 .	<b>-</b> -4 ;	⊶ .	21	ın ı	ו מו	ו כיו	ব :	DI C
- ( 2) (	COKIN	r7 17)	20		<b>-4</b>	-4	-	p=1	<b>-</b> 4	<b>-</b> 4		(T)	S	'n	'n	4.	DI
	CORINTH	,d ; m i	The second	<del>-</del> 1 :	<del>-</del> -4 :	<b>-</b>	<del>, -</del>			<b>-</b> 0 (	⊶ ,	m) i	ın ı	S I	ហ i	<del>7</del> 1	01
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- 1 - 1 - 2 - 1 - 1	CK.	⊷d M) i	Ð.	CII	C)	ष	<b>-</b>	⊶	a0 -	~	es i	CI :	LO I	ו מו	LO I	E (1)	01
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ILLINOIS HIME SUBSIDENCE RESEARCH PROGRAM 1995-1997 DATA

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ILLINOIS HIME SUBSIDENCE RESERRCH PROGRAM 1985-1987 DATA

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ILLINOIS MINE SUBSIDENCE RESEARCH PROGRAM 1935-1987 DRIA

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KEY TO CODES OF HINE SUBSIDENCE RESEARCH PROGRAH 1985-1387

1) NOT MINED 1) PRRALLEL (NO DAM) 2) OUNDING IN MINE 2) PERPENDICULAR COMP) 3) HATER 3) SCORRESTE CORANGE) 3) ROUM & PILLAR 3) SCOPE WEARLY ZERO 4) URBAN/OTHER 4) SEVERECRED) 5) HI XTRACT RETREAT 5) NOT HI EXTRACTION OR LONGHALL 5) OTHER MINE MINE	SLOPE 2 JEFFERSON CO. PRIME/IMPORTANT(SLOPE) 13A 0-1.52	RARY SIL TIGHT C GRAPY SIL TIGHT C RARY SED SIL TIGHT C RARY SED SIL TITE C PRIME (C) FELLOH SRRY SIL PR (1,30) R MIXED LOAM  B MIXED LOAM  B MIXED COAM  B MIXED SRRY SIL  DEEP GRAY SIL	
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APPENDIX B. CORN HARVEST DATA

APPENDIX B. CORN YIELD DATA. Key to data codes is given at end of Appendix A.

					CORN YIELD	1985:	SUMMARY				
MINE	TOWNSHIP	SECTION	PHOTO#	SAMPLE#	MINETYPE	EFFECT	MIDTH CIN.O	MOISTURE (22)	GRAIN (LBS.)	YIELD BU/A	YIELD KG/HÄ
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in	FRANKFORT	27	261	m	4	13	30	15.0	20.6	151.2	9500
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ORIENT4	CORINTH	O en	$\omega$	12	ഗ	7	90		ر. ص	ď	751.
ORIENT4	CORINTH	90	285	13	S	-4	30		i	10	989.
ORIENT4	CORINTH	23	275	1.4	ហ	m	30	गं	10. 0	19.	48V.
ORIENT4	CORINTH	23	P.	្រា	ហ	-	m	4	e,		232.
URIENT4	CORINTH	23	$\sim$	16		NO SAMPLE	30	Ē	田上田口	AKEN	SAMP
ORIENT4	CORINTH	53	r	17	ພາ	4	m	'n	1.7	oi.	2
0824	BROWNING	12	733 <b>7</b>	001	S	ო	(1)	ю	4,	06.	665.
0824	BROWNING	12	m	19	ហ	<b>⊢</b> 4	m	r.	26.0	ď	820.
0824	BROWNING	12	m	20	ហ	4	m	* ***	N. 0	ei.	402.
0824	BROWNING	12	m	21	រា	ო	m	'n	å	Ď,	231.
0824	BROWNING	12	234	22	ហ	<b>,</b>	m	20.5	26.3	196.1	12323.2
0824	BROWNING	12	m	23	വ	m	m	œ.	ö	74.	638.
0821	GOODE	7	+-4	4	ហ	7	m	i	Δ,	m.	685.
0821	GOODE	7		25	ທ	-1	m	œ	σ	37.	617.
INLAND	BALDHILL	36		Vi W	ហ	4	m	÷	u)	m	756.
INCAND	BALDHILL	36	-	27	เก	ന	m	4.	1.	ຫຼ	5345.
ロスピコスコ	BALDHILL	S S	$\rightarrow$	N CO	S		m	ហ	d	Eœ.	€11.
INCAND	BALDHILL	24		(A)	in i	7	m	ហ	1ິດ. ດ	<u>.</u>	934
	BALDHILL	7.4	-	in m	ហ	<b>⊷</b>	m	4.	4.	Œ.	eau.
	BALDHILL	12	186	ე ე	ហ	ന	m	ci.	4	ທ	4
ORIENTA	BALDHILL	12	186	(A)	S	<b></b>	m	ហ	9	'n	0 0 0
	BALDHILL	12	00	m m	ហ	4	m	ທໍ			o
INLAND	BALDHILL	24	211	n T	ហ	ന	m			9	21.
INLAND	ELKPRAIRIE	æ Ø	$e^{-1}$	i) M	ហ	m	1	4.	ď	u)	982.
INCAND	ELKPRAIRIE	(i)	$\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!$	30	ហ	ş=4	য	o.		သံ	818.
INLAND	ELKPRAIRIE	01	$\neg$	w 1,-	S	m	4.	= 0 p=4			66.
INLAND	ELKPRRIRIE	31	$\vdash$	ຫ ຫ	ហ		4	ĸ.		ŗ.	862.
RIENT	BLISSVILLE	m	9	(r) (n)	ഗ	m	m	'n			5 5 5
ш	BLISSVILLE	(n)	162	9	ហ	7	m	ហ	ý.	07.	6762.3
ENT	BLISSVILLE	(F)	162	4	S	1	m	4.			293.
			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							1	

					100		
		MINE SITE 1985: SUMMARY	SUMME	яку			
	YIELD	REDUCT CONTROL-YELLOW	TON Y	REDUCTION YIELD BUZA	ū	CONTROL-RED	
MINE SITE	BU/A	BU/A	×	BU/A	×	BU/A	2
a	0 7					0	00
cα	104.7	, a a a a a a a a a a a a a a a a a a a	2001			124.24	
<b>3</b> CI	192.0			70.2	27.00	192.01	1000
0	70.3	•	-36%		:	42.47	209
ш	95.3	35.60	22.50				
LL.	146.9			27.7	19%	134.00	012
ഗ	188.1			142.5	76%	165.77	88%
I	196.1			121.3	6.2%		
₩	137.1	27.52	20%				
ט	158.8			83.8	202	125.04	74%
¥	106.4	-3.87	1 2,7,2 27,5	62.0	Sez		
٦	103.7			68.0	2,99	103,71	100%
Σ	108.5			92.9	200		
z	77.4			38.2	7,07		
0	132.0	24.35	18%	129.0	27%		
1 1 1		- c	7	G G	, d	22 151	, 6
10.21	0000	00.4		) . )	;	10000	

				CORN YIELD	1986:	SUNNARY					
HINE	TOUNSHIP	SECTION	РНОТО#	SAMPLE#	SITE	MINE EFFECT TYPE	HIDTH CIN.)	HOISTURE C23	GRAIN (LBS.)	VIELD BU/A	YIELD KG/HA
보	t	1	-62	1	1-C		30	28.0		1 4.	701.
ORIENT 3	BALD HILL		147-020	CJ M	)- C	() (r	S 5	25.9	mu	85.9	5401.7
ENT	BALD HILL	4 =-	147-020		2-C		S 8	27.0	° -	óm	396
		ı <del>-</del> -1	147-020		2-5		30	22.6			182
		11	147-035		3 <u>-</u> c		B C	27.0	۲.	4.00 9.4	555.
		11	147-035		ۍ- د ا		38	28.9	9.	ú	.780
		11	147-035		3-0		38	33.6		15.1	
		11	147-035		E .		33	ก.	0	2.2	169.9
		1	147-035		<del>ا</del> ا		30	21.3	24.1	165.4	
		11	147-035		1		30	25.5	0	70.1	407.
		11:	147-035		4- f		30	0.0	Ö,	0.0	0
ORIENT 3	n (	11;	147-035		ည် က ။		30	20.1		126.0	321.
UKIENI 3		11	147-035		)- (    )		30	22.0		200.00	171.
OKIEMI S	BALD MILL	n u	147-027		יים ייי		000	0.00		- na	
OPIENT 3		วเก	147-027		- C		2 6	7 tu		0.00	0 6
OFFERT 4	1000	7 6	147-167		) C		O. C.E.	000		1 0 1 0	100
OPTENT 4	: 5	S &	147-167		, L		2 6	20.3	ir.	יו פ	1. DICE
A LATER	CORTATH	30	147-167		0-2		QE P	28.1	- 4	2000	
ORIENT 4	CORINTH		147-167		- A		000	0.0		0.0	)
ORIENT 4			147-165		9-C		33	24.3		117.3	7370.1
ORIENT 4	LAKE CREEK		147-165		4−8		38	24.0			7662.4
ORIENT 4	LAKE CREEK		147-165		8-0		38	26.1	4.6		1470.0
ORIENT 4	LAKE CREEK		147-156		9-C		30	21.9	22.7	154.5	9710.6
ORIENT 4	LHKE CREEK		147-156		ή-6		30	24.1	27.0		11232.1
ORIENT 4	LAKE CREEK		147-156		0-6		30	26.5	30.8		12399.6
.B. 25 & 2			1471		70-01	<del>-</del>	30	19.7	21.3		
20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			1471140		10-Y	£ 4	300	200	20°5	140.4	0
20 20 20 20 20 20 20 20 20 20 20 20 20 2			147-140		0 10 1	L 4	DC F	7	0.01		
	FERNING C	7 (0	147-14		11-0	4	2 5	C			0.1
8. 25. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2. 8. 2.	7 FRANKFORT	. 2	147-141		11-4	4-	30	21.3			3147
.B. 25 & 2		27	147-141		11-R	4	30	0.0		0	0
.B. 25 & 2	LL.	27	147-141		12-C	4	30	26.1		83.	1536.
.B. 25 & 2	ш	27	147-141		12-Y	4	30	28.0			4E.
.B. 25 & 2		27	147-141		12-0	4- E	30	25.7		2	810.
.B. 25 & 2	u.	27	147-141		12-R	<del>а</del>	30	0.0		Ö.	
.B.	BARREN	25	147-039		13-C	₩ (	30	25.8		ທໍາ	ശ
20 0	NAKAHA NAKAHA NAKAHA	2 6	147-048		7-51	r 7	30	7.00	9	0 - 7 7	
	DODOOD	N 6	DD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1. 4	0-61	r 4	0 0	5 0 C		rο	100
i c		200	000-25		1 7 T	r 4	000	בייני היני	1	J C	
0.8° 26		1) (r)	1471038	n 4	1 1 1 1 2 1 2 2	F 4	ک در	n v	D C		
ם מיני	NICOCOCO MICOCOCO	7 0	2	L 4	- T	L 4	2 0	7 0 0 0		ס ס	200
ם מ	N L L L L L L L L L L L L L L L L L L L	7 6	2 2	U 4	1410	L 4	000	r c	ם ה כ	- c	-4
, a	סחאאביי	40	פבח- זרן	0	MILT.	r	2	5	5	5	2

				CORN YIELD	1986:	SUMMARY					
	TOHNSHIP	SECTION	PHOTO#	SAHPLE*	SITE	MINE EFFECT TYPE	WIDTH CIN.>	HOISTURE (%)	GRAIN CLBS.)	YIELD BU/A	YIELD KG/HR
0.8.26	BARREN	30	147-095	47	15-C	+	30	26.2	26.3	169.2	10631.2
	BARREN	30	147-095	48	15-Y	4	30	24.7	13.5	88.7	5571.7
	BARREN	30	147-095	64	15-0	4	30	27.7	4.0	2.5	158.4
8	BARREN	30	147-035	20	16-C	<b>*</b>	30	27.9	9.2	57.8	3633.2
	BARREN	30	147-095	51	16-0	4	30	29.1	5.7	35.2	2213.6
æ	BARREN	30	147-095	52	17-C	*	30	32.1	12.0	71.1	4466.2
8	BARREM	30	147-095	53	17-Y	4 2	30	21.4	13.8	94.5	5941.2
8.	BARREN	30	147-095	54	17-0	<b>₹</b>	30	25.9	19.1	123.3	7752.1
8	BARREN	30	147-095	52	18-C	4	30	26.4	18.2	116.7	7337.0
æ	BARREN	30	147-095	56	18-4	4 2	30	20.1	18.5	128.8	8036.3
	30009	23	147-085	55	19-C	4	38	26.7	27.9	140.7	8843.3
0.8.21	GOODE	23	147-085	58	19−⊬	4 2	38	28.7	23.6	115.8	7276.3
8	30009	23	147-085	59	19-0	4	38	26.3	15.1	76.6	4812.3
	G000E	23	147-085	09	19-R	4	38	0.0	0.0	0.0	0.0
8	GOODE	23	147-085	61	20-C	4	38	24.9	26.1	134.9	8475.9
æ	G000E	23	147-085	62	20-Y	4 2	36	25.6	23.5	120.3	7560.5
0	G000E	N G	147-085	63	20-0	4	38	27.5	12.2	6.03	3827.4
8.	GOODE	1	147-064	64	21-C	5	30	23.8	19.9	132.2	8305.7
0.8.21	G000 <b>E</b>	-	147-064	65	21-Y	5	30	26.3	21.1	135.5	8517.7
	6000E	<b>~</b>	147-064	.93	21-0	ED LD	30	24.5	5.2	34.2	2150.4
0.8.21	G000E	-	147-064	53	22-C	1 1	30	22.5	25.6	172.9	10667.0
0.B. 21	GOUDE	1	147-064	83	22-Y	5 2	30	26.9	15.3	97.5	6126.0
ORIENT 3	BALD HILL	15	147-044	69	23-C	5	30	29.5	11.0	67.9	4265.8
ORIENT 3		16	147-044	20	23-4	5	30	23.4	20.6	137.5	8643.0
ORIENT 3		16	147-044	71	23-0	ED CO	30	35.1	0.5	8	177.7
ORIENT 3		16	147-044	72	24-C	5	35 25	27.2	16.7	106.0	6659.1
ORIENT 3		16	147-044	73	24-7	5 2	30	30.1	14.1	82.9	5398.4
ORIENT 3		16	147-044	74	24-0	ro C	30	0.0	0.0	0.0	0.0
ORIENT 3	BALD HILL	เก	147-027	75	25-C	5 1	38	20.6	10.3	56.3	3536.4
ORIENT 3	BALD HILL	Ŋ	147-027	92	25-Y	5 2	33	13.3	18.4	109.8	6838.3
ORIENT 3		មា	147-027	77	26-C	20	30	12.5	7.7	58.7	3690.4
ORIENT 3		S	147-027	78	26-0	Э Э	30	13.3	2.0	ຕຸຕ	332.4
ORIENT 3	BALD HILL	ហ	147-027	52	27-C	5	30	16.1	14.7	107.5	6755.4
ORIENT 3	BALD HILL	ហ	147-027	80	27-Y	5	30	19.1	13.0	91.7	5760.5
ORIENT 3		ស	147-027	81	28-C	5 1	30	13.2	8.0	60.5	3803.5
ORIENT 3	BALD HILL	ហ	147-027	82	28-0	S	30	16.5	a.a	24.0	1509.3
ORIENT 3	BALD HILL	רט	147-027	83	28-R	ιo Ψ	30	0.0	0.0	0.0	0.0

MINE SITE 1986: SUMMARY

95 CD 50	100%	100%	100%	972	100%	t	ı	,	1	100%	1	1	ŧ	972	100%	8	ı	100%	1	t	1	1	ı	•	1	1	ı	100%
CONTROL-RED BU/A	149.1	200.3	183.5	82.9	60.0	N/G	D/K	0/X	D/K	140.7	D/X	N/D	D/¥	85.7	165.4	D/K	D/N	81.3		D/K	0/N	O/N	D/K	₩ 1	D/H	D/K	O/N	80.5
BUZA -ORANGE	45%	,	76%	132	42%	385	38%	-732	1	46%	સ છ છ	782	ı	83%	58%		862	259	80%	-28%	74%	ı	296	100%	•	912	ţ	209
REDUCTION YIELD BELLOH CONTROL-C	67.7	O/K	138.8	11.3	25.3	166.7	22.6	-52.2	2/2	64.1	74.0	120.8	D/¥	73.3	95.3	D/X	140.9	56.2	93.9	-42.8	98.0	Q/N	65.1	106.0	Z/D	53.4	D/N	36.5
REDUCTI ELLOW	-20%	30%	13.	-112	27%	48%	١	-33%	-10%	182	112	4 4 5	3%	-102	ı	22%	39%	372	14%	-162		4.54.75	-1032	19%	-95%	ı	15%	ŧ
CONTROL-YELLOH BU/A	-29.7	59.8	8.6-	-9.5	16.4	80.5	D/N	-23.4	-12.1	24.9	14.6	68.5	3.4	-8.5	O/N	27.8	64.0	29.8	-4.6	-24.2	-3.3	75.4	9.69-	20.1	-53.5	0/x	15.8	O/K
YIELD BU/A	149.1	200.3	183.5	85.4	60.0	169.2	57.8	71.1	116.7	140.7	134.9	154.4	133.6	88.4	165.4	126.0	163.7	81.3	117.3	154.5	132.2	172.9	67.9	106.0	56.3	58.7	107.5	E0.5
HINE	10	11	12	13	14	15	16	17	18	19	20	-	2	m	4	ഗ	۵	~	œ	თ	21	22	23	24	22	56	22	28
HINE	4.	प	4	₹	4	4	4	<del>q</del>	T	4	ত	S	'n	S	S	ß	r	ហ	10	'n	'n	Ŋ	2	ហ	S	S	വ	ហ

DORN PIELD 1987: SUMMARY

				æ	O.L	10	_	٠.	m		۲.	-+ (	n c	יו ככ		۰,	n ·	٠,	m.			m	-4	m	-4.	۸۱.			n -	- ·	n /	n /	٦.	0	m ·	m	رم د	m	m	C1	_	-
		OIL	4.6	4	4.8	4.7	4.7	<u>a</u>	4,33	4	، ب	ς.		ñ.	7.1	4.50 0.00		75.9	<u>a</u>	, w	4.01	4.2	5.01	4.00	Δ. (1)	4.5	φ ;	9.27	4.10		i č	2.5	P. 60		۰,	φ,	œ.	20.		4.92	5.2	4.2
		PROTEIN	10.14	8.50	8.51	10.83	9.30	7.48	8.13	11.27	ر ا ا ا	3.83 0.05	5000	20.01	מיים מיים	11.25	11.30	10.10	9.34	11.40	9.62	9.92	8.76	3.56	10.20	8.04	11.34	9.43	11.18	18.0	10.35	3.61	8.50	ית מיני	9.08	7.29	8,47	9.72	10.52	10.20	11.17	
	KERNEL	DENS(g/cc)	0.72	0.74	0.72	0.74			0.70		0.77	0.78	2.0	2.0	9.0	0.72	0.73	0.78	0.75	0.71	0.76	0.71	0.73	0.76	0.77	0.72	0.76	0.76	0.63	0.01	0.80	51	0.73	0.77	0.77	0.72	0.74	0.75	۴-	٠.	0.75	0.75
		WT. CGM) DENS	32.99	30.05	27.72	32.49	34.94	31.88	25.62	24,45	34.70	38.65	24.53	36.15	33.77	33.92	34.20	29.83	31.24	33.56	31.66	32.58	32.17	32.38	33.03	26.18	31.71	31.18	37.22	27.11	33.28	32.44	29.83	26.45	28.57	28.83	31.35	29.43	30.29	33.99	21.36	22.53
	EARS		55							ထ	99	45	<del>,</del> ;				5				43	20	5	20	8	en i	m	21	5 5	25	26	ה ה	63				۰	S		54	6	28
CORM	VIELD (	KG/HR	9147.2	7193.0	4496.9	1990.0	12162.3	11473.7	2708.0	132.1	13404.2	11539.4	#041. u	11962.5	11830.2	11404.9	11120.9	10723.4	6.7868	11701.9	9314.0	10754.7	8670.9	11585.0	10352.2	2957.8	535.0	10165.5	10134.8	2.2588	12291.5	10366.1	12826.7	6876.9	5740.3	5452.1	5129.8	90508	9933.2	10668.6	1360.1	7204.2
	YIELD	BUZA	145.5	114.3	71.5	31.7	193.5	182.6	43.1	2.1	213.3	183.6	72.3	190.3	7.681	181.5	176.9	170.6	143.2					m,	164.7	47.1	മ	161.7	161.3	158.0	195.6	174.5	204.1	109.4	91.3	86.7	81.6	144.0		169.7	21.6	
	HOIST	8	16.5	21.0	17.9	25.7	13.6	14.5	17.6	19.6	19.5	20.5	17.9	0.02	2.5	17.7	17.8	19.1	21.4	14.2	15.4	23.6	22.4	16.4	16.0	25.0	18.6	19.6	13.2	17.2	17.8	22.4	22.2	17.4	20.02	21.0	22.6	19.0	19.4	22.4	22.4	19.8
	GRAIN	CLBS.	20.0	16.6	10.0	4.7	25.7	24.5	6.0	0.3	30.4	26.5	10.1	20.0	P. 97	25.3	24.5	24.5	20.9	24.9	20.1	25.7	20.4	25.3	25.5	7.2	1.2	22.8	22.3	21.9	27.3	22.8	30.1	15.2	13.1	12.6	12.1	20.4	22.5	25.1	3,2	16.4
	COE HT	(LBS.)	26.0	21.2	13.2	6.2	29.9	28.7	2.5	0.5	36.4	31.6	12.3	35.1	31.6	29.3	28.2	29,3	25.5	28.9	23.5	31.4	25.1	29.5	26.1	e. 6	1.5	26.6	27.4	52	31.5	31.2	36.2	18.0	16.0	16.0	15.4	24.9	27.1	30.2	4.5	20.3
	HTH C	C.ND	30	8	20	30	30	25	20	<u></u>	_문	22	B (	2 5	Dis.	9	D.	9	30	9	30	9	30	30	30	20	30	8	30	9	90	<u>D</u>	30	30	30	30	30	99	30	30	30	30
		SIE		ď	m	T	-1	N	m	ব		N I	י כא	<b></b> (	N.	<del>-</del> 4 :	N	1	N	-1	~		N		2	(L)	4		2	<b>-</b>	cı.		N	<b>~</b> 4	N	-	~	-1	N	m		7
		HINE	꿆	HE.R.	HER	HE 30	Ī	Ξ	Ę	Ξ	3		Ξ:	Ξ:	I	Ξ.	Z	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ	Ė	Ξ	Ξ	Ξ	Ξ	Ξ	Ξ	E.	HER.	HER	HER	3	E	Ξ	Ξ	=======================================	Ξ	Ξ
		SITE	1-C	1-4	1-0	# 	2-C	2-4	2-0	ex CV	U .	3- i	ر ا ا	7-6	1	2	2-12	ب 9-	6-5	2-5	7-7	8-C	λ−8	9 <del>-</del> 6	9-6	9-0	9-R	10-C	10-7	11-C	11-Y	12-C	12-7	13-C	13-5	14-C	14-7	15-C	15-4	15-0	16-C	16-Y
		SAMPL		2	m	4-	ID)	ص	۲-	80	σ,	100	1	21	13	च ।	12	16	17	18	13	50	21	22	23	24	52	2£	25	53	53	39	31	32	33	ы 4	35	36	32	99	39	40
ā		SOIL	14	14	14	14	13	13	13	13	2	CI I	2	£1	77	m i	m	C4	N	~	N	2	2	СJ	<b>6</b> 1	cu	2	m	m	m .	m	N	63	108	108	13	13	13	13	13	13	13
1000		PHOTO	158	158	158	158	154	154	154	154	155	122	155	122	155	146	146	145	145	148	146	145	145	145	145	145	145	138	138	138	138	116	116	119	119	103	103	103	103	103	103	103
-		SEC	14	<u>₹</u>	4	7	36	36	36	36	32	32	5	32	ريا در	26	56	22	22	26	56	27	25	27	22	22	25	22	22	22	25	12	12	10	10	32	32	32	32	32	32	32
		TOWNS	L CRK	L CRK	L CRK	L CRK	FRANK	FRANK	FRANK	FRANK	FRANK	FRHNK	FRANK	FRANK	FRANK	FRANK	FREEK	FRANK	FRAME	FRANK	FRANK	FRANK	FRANK	FRANK	FRANK	FRANK	FRRMK	FRANK	FRANK	FREEK	FRANK	BROHN	BROHN	BROKK	BROHM	BAREN	BAREN	BAREN	BAREN	BAREN	BAREN	BHREM
		HINE	0R 4	08.4	0R 4	08. 4 4			BEN 25											25	25	25	25	25	25	25	25	25	25	25	22	24	24	24	24	56	26	26	26	26	28	BEN 26

CORM PIELD 1987: SUMMARY

	1	OIL	1.60	m.		4.48	1.21	1.07	3.88	3.80	1.61	4.15	4.34	3.98	4.45	4.13	4.90	4.62	5.11	4,45	4.65	4.83	5.19	5.02	4.66	4.80	5.00	4.32	4.88	4.96	4.72	4.93	4.98	5.03	4.07	4.08	4.53	83.	4.57	4.06	0 !!
		z	97			·		·								•	•	-	20	83	11	. 99	02	91		•	•			•	•			-1		r_	. 39	, E6.	.54	88	0
		PROTEI	10.97													r.				8	10.					10.						8	80			69	11	တ	00	10	11
	KERNE	DENS (g/cc)	0.48	0.76	0.72	0.74	0.73	0.75	0.67	0.63	0.69	0.64	0.70	0.70	0.73	0.72	0.69	0.69	0.69	0.78	0.77	0.78	0.78	0.76	0.75	0.77	0.75	0.75	0.76	69.0	0.74		0.76	0.77	0.72		0.62	~	0.75	0.73	
		(gm) DEMS	33	32	52	61	41	11	0.	36	.01	=	25	91	7	32	25	64	60	33	0.0	45	51	19	40	32	56	90	07	51	25	53	07	22	0.0	19	25	56	66	50	0
		HT.C	30.8	28.3				27.1	21.2	23.8	33.0	15.1	25.9	20.1	28.4	23.9	21.0	18.6	m)	32.3	34.6		33.5	33.1		31.9			ç,	O.	'n	υ,	3	34.2	26.6	26.4	26.2	28.7	27.9		
	EARS		58	9	64	24	67	55	60	4	28	m	감	₹ 10	<b>4</b>	54	45	4.0	37	52	52	52	t S	52	20	4	40	56	58	56	56	28	54	20	72	7	4	4	51	52	0
CORM	YIELD	KG/HR	10439.5	7003.1	8010.2	7003.7	7879.1	5637.4	5641.7	7501.2	13178.5	46.6	8279.4	5566.4	10239.2	6760.8	5805.7	4997.4	4441.9	12594.8	11551.5	8382.1	9911.8	11948.5	10365.3	9545.5	8416.7	12218.9	12335.9	11251.4	12859.0	12357.4	11842.9	11653.6	8832.2	10616.7	729.6	6869.9	0	5682.7	0
	YIELD	BU/B						89.7	83.8	119.4	209.7	0.7	131.7	9E-8	163,9	107.6	92.4	28.82	70.7	200.4	183.8	133.4	157.7	190.1	164.9	151.9	133.9	194.4	196.3	179.0	204.6	196.E	188.4	185.4	140.5	168.3	11.6	109.3	144.6	Ō	0
	HOIST	3	18.2	0	σ,	Ċ,	œ	4.	9	17.0		15.0	14.6	14.6			26.9	31.4	34.6	19.6	21.6		22.0	19.8	17.0	25.2	21.6	22.0	21.8	24.2	19.6	23.0	20.8	21.2	25.0	29.0	33.4	19.6	16.2	17.0	0
	GRAIN	CLBS.	23.3				21.9		12.5		30.0	0.1	17.7			14.8	14.5	13.3	12.4	28.6	26.9	18.8	23.5	27.2	22.8	22.4	19.6	28.6	28.8	27.1	29.5	29.3	27.3	27.0	21.5	27.3	2.0	15.6	19.8	12.5	0
	B HT	.85.)	28.5									0.2	20.7	14.0	26.4	17.5	19.7								27.3	27.8	24.5	34.1	34.0	m,	ਚ	35.8	32.5	33.1	26.5	S	3.6		'n	S	0
	HTH COB	CIN.) CL	30						30			30				30			30								30		30	30	30	30	30	30	30	30	30	30	30	30	30
i	-	SIE	m		0	m		N	-	2	m	দ	-	cu	<b>-</b>	CI	-	c)	m	+	2	m	-	cu	(C)	H	2	<b>***</b>	N	m	1	CJ	-4	N	-	cı	m	Ħ	2	-	4
		HIRE	Ξ	Ξ	Ξ	Ę	Ξ	Ξ	HER	HER	HER	T S	HER	HER	HER	HER	HER	HER	HER	HER	HER	HER	HER	HER	HER	HER	HER	HEX	HER	HER	HER	HER	HE.	HER	HER	HER	HEP.	HER	HER	HE.	HER
		SITE	16-0	17-C	17-7	17-0	18-C		19-C	19−61	19-0		20-C	20-Y	21-C	21-Y	22-C	22-Y	22-0	23-C	23-14	23-0		24-4	24-0	25-C	25-12	26-C	26-Y	26-0		27-7	28-C	28-Y	29-C	29-5	29-0	30-C	$\circ$	31-C	
	1	SAMPL	4	4	4.	<u>4.</u>	₽.	<del>4</del>	<u>A</u>	<u>4</u>	£3																														- 1
ā		SOIL	13	13	13	13	13	13	4	14	14	14	13	13	13	13	m	m	n	m	m	m	2	cı	2	<u< td=""><td>2</td><td>m</td><td>m</td><td>m</td><td>4</td><td>Ψ.</td><td>m</td><td>m</td><td>₩.</td><td>₹</td><td>্ব</td><td>13</td><td>13</td><td>13</td><td>7</td></u<>	2	m	m	m	4	Ψ.	m	m	₩.	₹	্ব	13	13	13	7
10000		PHOTO	103	086	086	980	980	086	072	072	072	072	072	072	072	Ú72	690	690	690	890	068	990	690	690	690	064	064	065	065	0.65	065	065	065	065	061	061	061	057	057	035	035
-		SEC	32	23	23	23	23	23	7	7	N	c)	2	N	CJ	C)	ڡ	9	9	ro	S	ហ	w	9	9	31	31	32	32	35	32	32	32	35	32	35	35	25	S S	11	11
		TOHMS	BAREN	GOODE	COODE	0000E	GOODE	0000E	2000S	GOODE	G000E	3000S	30009	6000E	30009	30009	G000E	30009	3000S	BAREN	BAREN	BAREN	BAREN	BAREN	BAREN	ELK P		ELK P		ELK P			ELK P	ELK P		ELK P		B HIL	H	B HIL	B HIL
		HINE	BEN 26						N	Ŋ	N	BEN 21	C)	N	C/I	N	BEM 21	N	€1						BEN 21	INLAND	IMLAND	INLAND	INCAND	INLAND	INLAND	INLAND	IMLAND	INLAND	INLAND	INLAND	IMLAND	INLAND	INLAND	0.P. 3	OR 3

1 1 8 8 1 1	CONT.	78.2 98.9	ष • ।ऽ •	9.5°	200.0 94.0 2.3
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	CONT0	50.8 7-7.7 66.1	2. 45. 1.33 . 51.73 . 52.50 . 52.50 .	133.6 33.5.7 14.6.4 1.7.9	-30.6 190.8 -623.4
	CONT0 BU/A	74.0 150.4 141.0	137.3 -255.7 -144.5	2119.9 67.0 67.0 15.4 128.9	33.7 91.2 270.4
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HINE SUBS	PHOTO#	11111111111111111111111111111111111111	143 1145 1116 1103 1103 1003 1003 1003	00000000000000000000000000000000000000	032
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SOIL FERTILITY AT CORN HARVEST SITES

										S	SOIL	1	 	1	! ! !	; ! !	 			
	27 - 12		GEGANIC	CBR	BON (2)		H.		P205	(рр2н)	2	Σ.	КСрр2н)	Ç		Ca(pp2	2H)		Hg (pp2H)	
SOIL	SAHP	SITE	DE	EPTH Ci	Çu.	DE	PTH G	in>	DEPTH	Ü	2	DEP	EPTH C	(in)		DEPTH	GnD	30	DEPTH CL	5
			9-0	6-12	AVG.	9-0	6-12	AVG.	0-6 6	-12	RVG	0-6 6	-12	AVG.	9~0	6-12	AVG.	0-6	6-12	AVG.
14	•	1-C		0.40		5.9		5.5	133	~	13	134	94	114	2340	1595	ł	234	276	255
14	N	1-F		0.29		5.7		5.2	14	Ŋ	10	194	206	200	3410	2240		596	1075	836
म्	m	1-0		0.29		6.5		5.9	(C)	~	20	202	182	192	3940	2870		916	1280	1098
14	4.	0¢		0.67		υ. σ.	-	ຜູ	23	<u>r</u>	15	138	73	108	2340	1920	2130	320	276	298
13	ហ	2-4		0.63		5.8		ر د د	<del>4</del> 5	9	ا ا	206	102	154	2240	1700		171	171	171
m r	ωr	2-0	0.0 4.0	0.71		u	ໝູ່	0.0	er c	13	ري د د	106	7 23	æ 7	2560	2240		234	234	234
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2	) or	1 P		0.87		0 0		. 2	. m	16	34	110	78	- 60	3300	2560		234	171	203
N	10	3-6		0.64	0.79	6.1		5.7	23	σ	16	94	9	22	2870	1920		192	149	171
N	11	3-0		1,14		5.6		5.5	90	18	27	170	114	142	2450	2340		404	468	436
13	12	4-C		0.48		7.3	-	7-1	47	21	34	300	142	221	3200	2770		213	255	234
13	13	7-7		0.83		7.1		6.2	33	4	27	241	110	176	3200	1810		213	213	213
ליו	4	رب د		0.82	0	7.6		2.6	n N	₹.	94	206	90	148	3200	2980		128	8 S	107
ሰን (	15	5- (c		0.71		L- (		7.1	99	16	11	162	20 1	120	3300	2870		128	106	117
71.0	15	ב ני		D 0		9 0		90.0	30 0	53.6	J C	162	ر م	118	2450	2010		106		w r
u c	- 0	0 1		200		ים מ		יים	101	ט מ	) U	100	200	207	25070	25.50		D	907	777
u n	B 0	7 7		2,0		- K		ם מ	0 4 U 4	0 m	D 0	L 0.	E 10	115	3620	2550		171	171	171
10	202	- C		0 0		- P	9	200	- 60	2 8	יו ני	202	106	154	3300	3510		100	-11	202
ru.	21	9-5		0.46		7.1		6.8	6.1	Ŧ	38	186	86	136	2560	2340		143	128	139
CI	22	9-C		0.30		7.3		6.9	£.	13	24	122	7	98	3620	2340		149	128	139
N	23	7-6		0.76		7.0	۲- ص	7.2	91	21	56	174	99	136	3200	2560		255	362	309
CI (	24	0-6		0.38		2	4	2.6	91	۳ ر 00 ر	00 I	280	303	292	3090	3410		341	341	341
N i	52	מב כ ה ה		0.72		9 1	8.0	D 0	rd r	5.5	00 v	275	205	241	3620	3510		341	255	298
ין (ד	יז ני	10-0		0.40		~ r	ο u	, u	D. 20 ∕ 4	a. c	71	170	12E	131	2980	2650		123	106	117
ויה כ	2 00	11-C		0.51	0.76	- 1	0 0	0 1	104	19	- 62	2 3 3 3	23.0	370	2870	2340	2605	128	1 00	107
רו	ا ا ا ا	11-5		0.68		7.6	F-0	4.	97	99	68	245	118	182	3300	2870		85	88	95
N	30	12-C		0.57		7.1	6.8	7.0	46	24	53	150	90	120	3410	2870		149	92	117
N	(C)	12-7		0.46		7.2	6.0	9.9	9	11	26	122	<u>6</u> .	108	3030	2660		128	143	139
109	32	13-C		0.35		6.8	N.	6.1	56	22	33	293	325	358	7670	4690		1210	1210	1210
108	ന ന	13-5		1, 14	0	4.0	9,9	2.6	4	31	63	345	256	299	9600	3510		တ က က	916	937
13	<del>ال</del>	14-0		0.15		- S	<u>م</u> ص	6.2	प	9	30	148	114	130	3830	2010		171	27.1	224
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	4	16-0		0.87	0.91	7.1	7.1	7.1	3. L-	8	1 10	158	110	134	3940	3300		234	234	234
E	42	17-C		0.21	0.42	7.2	5.5	6.4	E 4	12	25	140	102	121	2450	2130		171	255	213

SOIL FERTILITY AT CORN HARVEST SITES

1 6		AVG.	192	192	192	117	1027	160	320	255	405	160	234	110	128 254	127	171	160	128	128	139	288	303	139	149	202	120	0 0 0	266	128	117	107	128	160	117	181	246	693
Н9 Срр2н3	TH Gin	5-12	255	255	234	106	1075	171	320	234	448	ה ה ה ה	700	700	106	770	149	192	128	106	128	341	362	123	149	725	106	ייי מ מ מ	255	106	106	128	106	149	128	275	320	787
. E	DEPTH	0-6	128	128	149	128	979	143	320	276	352	174	45.54	ממח	149	136	192	129	128	143	143	ان ان ان	255	149	149	217	140	256	276	149	128	85	149	171	106	82	171	618
	1 2	AVG.	2982	3300	2555	2290	2392	2235	2870	2875	1385	מרדן	2822	חרזמ	3130	17 7 T	3940	2980	1315	3460	3190	3835	1205	2395	2500	טטרו	27.13	200	3190	3245	3085	2075	1758	1698	282	2555	1600	3515
Ca (pp2H)	DEPTH Cin)	6-12							_															_	2870						_							_
3	DE	9-0	1																						2130													
	2	AVG.	184	234	. 101	123	216	001	146	24.5	261	200	15.0	701	318	70.	165	158	951	661	118	593	334	128	216	D (	001	- 0	115	112	60-7	104	114	31	92	921	179	174
К (рр2н)	TH Gin	-12		_	_	_	_		_	_		_	_							_			_	_	310 2					_	_	_		_	_	_	_	_
X	DEPTH	0-6 6	218	288	122	170	218	102	156	192	184	170	106	175	3.97 0.00	7.0	576	170	166	258	525	615	379	166	122	707	110	100	140	130	106	114	130	292	94	98	205	218
(pp2H)	Gin	AVG	62	73	32	37	20	თ	8 9	<u>4</u>	13	70	2 2	Ξ;	124	ָם מים מים	123	20	47	49	207	159	71	36	100	<u>.</u>	ך ר ה	- r	25	26	13	22	51	51	21	22	28	48
i	DEPTH	6-12	34			28		<u>د</u>	න න	53			N o								Τ.				153	, c	110	, c	9 07	12	00	14	112	1 21	17	16	78	10
P205		9-0	96	103	E)	₩	3	퓌	56	ا م	ru i	ňř	άč	٦ ;	163	77	16.	m	S	22	251	251	115	'n	₹.	4 (	N 4	2 4	4 4	4	11	ĕ	28	96	'n	27	25	œ
	Cul	AVG.	6.0	6.5	7,3	6.5	4.7	5.8	ر د د	9.5	a, r	יי טינ	ຸ້	ם מ	2.5		P	6.1	2.4	6.4	~ .3	6.5	6.0	٠. دی	ι- ι ω ·	- ·	۰ م م م	. u	2,0	2.2	7.2	6.1	5.4	5.0	7.2	6.1	9.9	6.7
F.	DEPTH G	6-12	5.6	6.3	6.8	5.3	4.6	5.2		9.9	4. 4 Φ L		ر د ر	0 1	7.1	) ; 	- I	5.1	7.5	5.6	7.1	ν. 4.	4.8	۳. س	۲- ۱	ָר היי	ກຸ່ມ	ייי עים	9 6	6.9	7.0	5.9	5.2	4.9	6.7	4	υ. 3	6.5
	DE	0-6	ω. Ω.	9.9	7.7	7.1	4°B	6.4	ים הים	ς.	a.r D.	י הי	2 1	ה" ו ני	2.2	- 1	य ।  -	7.0	7.5	7.2	۲- ۳	7,5	7.1	7.6	~ ·	0,0	ים הים	- 4	- M		ار س	6.3	5.5	5.1	7.6	7.5	7.4	6.9
80N (%)	2	RVG.	0.73	0.95	0.51	0.55	0.25	0.51	1.11	0.35	0.50	ם מ	D €	7.0	1.07	1.13	1.11	1.20	1,15	1.15	0.93	0.95	0.91	0.60	0.55	75.0	1.03	000	0.96	0.86	0.39	0.56	0.62	0.58	0.56	0.54	0.62	1.09
CAR	DEPTH CL	6-12	W	0.67	0.27	0.35	0.10	0.35	1.01		9.4	20.00	200	0.63	0.82	25.0	1.01	0.81	0.93	0.35	0.75	0.60	0.68	0.45	0.64		, a	9 6	0.75		0.81	0.44	0.42	0.37	0.42	0.35	0.37	0.66
ORGANIC	DEI	9-0												9									1.14		0.45		1.10		4									1.51
1	SITE		12-12	17-0	18-C	18-Y	19-C	19-h	19-0	- K	20-0	7-02	21-12	7-12	25-52	7-22	22-0	23-C	23-7	23-0	24-0	24-7	24-0	25-C	25-52	7-97	2000	2 7 5	27-7	28-C	28-Y	29-C	29-Y	29-0	30-C	30−4	31-C	31-E
SITE	SAMP	1	€	4	45	45	5-	8	5																65											22		
8	SOIL		13	13	13	13	4.	14	<u>च</u> :	F 1	E.	בן :	1.1	77	ו כיו	<b>7</b> (	m) i	m	m	ריו	N	N	N	N	cu i	ו ליו	ה כיו	י כ	4	(17)	m	a.	4-	4	13	13	13	13

## APPENDIX C. STATISTICAL TABLES

The following tables give results of chi-square evaluation of data. The chi-square test is a statistical test to develop expected frequencies of experimental observations. The numbers in parentheses show expected values of the frequencies and the numbers without parentheses show the actual observed values. When there is a significant difference between the expected and actual values, it is indicated by one or two asterisks, depending on the level of significance.

## Definitions

x ²	chi square
df	degrees of freedom
*	statistically significant data at 5% confidence level
**	statistically significant data at 1% confidence level
Но	null hypothesis
Prob	probability
LS mean	least square mean

Table C.1 Mine type x SIE class, 1985-1987

CIE		Mine type	
SIE class	LW	HER	Total
None Slight Moderate Severe	**309 (422) **128 (36) ** 27 (15) ** 12 (3)	3881 (3768) ** 230 (322) 122 (134) 16 (25)	4190 358 149 28
Total	476	4249	4725

 $\chi^2 = 335.96$  with 3 df

Conclusion: significant mine type x SIE class interaction. Specifically, a higher percentage of LW has severe SIE than HER.

$$\chi^2_{.01} = 11.3$$

$$\chi^2_{.01} = 11.3$$
  $\chi^2_{.05} = 7.81$  with 3 df

$$\chi^2.01 = 6.63$$

$$\chi^2.01 = 6.63$$
  $\chi^2.05 = 3.84$  with 1 df

Table C.2 Slope x SIE class, 1985-1987

Clara alaca		SIE class	
Slope class (%)	None and slight	Moderate and severe	Total
0-1 1-4 4-7 7-30	3290 (3353) 4035 (4038) 3662 (3630) 2200 (2166)	**127 (64) 80 (77) ** 38 (70) ** 8 (42)	3417 4115 3700 2208
Total	13187	253	13440

 $x^2 = 106.29$  with 3 df

Conclusion: significant interaction.

$$x^2$$
 or = 11.3

$$\chi^2_{.01} = 11.3$$
  $\chi^2_{.05} = 7.81$  with 3 df

$$\chi^2_{.01} = 6.63$$

$$\chi^2_{.01} = 6.63$$
  $\chi^2_{.05} = 3.84$  with 1 df

^{**}Observed value significantly different than expected value (.01).

^{**}Observed value significantly different than expected value (.01).

Table C.3 Mine type x slope, 1985-1987

Clara alaca		Mine type	
Slope class (%)	LW	HER	Total
0-1	**166 (133)	1149 (1182)	1315
1-4	135 (141)	1259 (1253)	1394
4-7	134 (128)	1129 (1135)	1263
7-30	** 42 ( 76)	705 ( 671)	747
Total	477	4242	4719

 $x^2 = 26.64$  with 3 df

Conclusion: significant interaction.

$$\chi^2_{.01} = 11.3$$

$$\chi^2_{.01} = 11.3$$
  $\chi^2_{.05} = 7.81$  with 3 df

$$\chi^2_{.01} = 6.63$$

$$\chi^2_{.01} = 6.63$$
  $\chi^2_{.05} = 3.84$  with 1 df

Table C.4 SIE class x HER mines, 1985-1987

SIE class	1985	1986	1987	Total
None and slight	991(1002.3)	1451(1457.1)	1669(1651.6)	4111
Moderate and severe	* 45(33.6)	* 55(48.9)	* 38(55.4)	138
Total	1036	1506	1707	4249

 $\chi^2 = 10.43$  with 2 df

$$\chi^{2}_{.01} = 9.21$$
  $\chi^{2}_{.05} = 5.99$ 

$$\chi^2_{.05} = 5.99$$

Conclusion: some evidence of SIE class x year interaction for HER. Moderate and severe SIE was relatively smaller in 1987 than in 1986 but relatively greater in 1985 than in 1986.

^{**}Observed value significantly different than expected value (.01).

^{*} Observed value significantly different than expected value (.05).

Table C.5 SIE class x LW mines, 1985-1987

SIE class	1985	1986	1987	Total
None and slight	99(107.4)	142(136.8)	196(192.8)	437
Moderate and severe	**18(9.6)	7(12.2)	14(17.2)	39
Total	117	149	210	476

 $x^2 = 11.07$  with 2 df

$$\chi^2_{.01} = 9.21$$
  $\chi^2_{.05} = 5.99$ 

Conclusion: for LW there is SIE class x year interaction. A greater number of moderate and severe SIE were noted in 1985 than in either 1986 or 1987.

**Observed value significantly different than expected value (.01).

Table C.6 Yield reduction x mine type, 1985-1987

	CIF	LS	means yiel	ld reduction	ons
Mine type	SIE class	1985	1986	1987	Avg
LW	2	-24.80	11.21	3.03	-3.52
	3	70.20	57.59	43.08	56.96
	4	171.10	136.08	183.60	163.59
HER	2	11.60	10.07	3.35	8.34
	3	84.93	74.71	25.70	61.78
	4	114.20	98.22	97.77	103.40

Conclusion: yield reduction for SIE class 4 is consistently greater for LW than for HER. While this difference was not great enough to be detected as significant in any one year, the combined analysis of all 3 years enabled detection of a mine type X SIE class interaction.

Table C.7 Combined analyses of variance of corn yield reduction data, 1985-1987

Source of variation	Degrees of freedom	Sum of squares	Mean square	F value	Prob > F
Total	126	581,643.11			
Year	2	1,267.12	633.56	0.25	0.783
Mine type	1	3,475.01	3,475.01	1.34	0.248
Year x mine type	2	3,850.80	1,925.40	0.74	0.477
SIE class	2	188,266.90	94,133.45	36.41	0.000
Year x SIE class	4	10,295.80	2,573.95	1.00	0.413
Mine type x SIE class	2	16,703.46	8,351.73	3.23	0.043
Year x mine type x SIE class	4	3,108.19	777.05	0.30	0.877
Experimental error	109	281,844.12	2,585.73		

Table C.8 Least squares means from combined analysis of corn yield reduction data, 1985-1987

	Yie	Yield reduction	Prob >  t  for	For							
	Bu/A	Standard error	Ho: LS Mean(I)	= (I)	LS Mean(J)	an(J)					
Mine type			1		2						
1 LW 2 HER	72.3 57.8	10.5	0.2489	68	0.2489	489					
SIE class			1	2		က					
1 Slight 2 Moderate 3 Severe	2.4 59.4 133.5	10.4 10.8 11.3	0.0002	0.0002	1	0.0001					
Mine type-SIE class			1	2	က	4	2	9			
1 LW - Slight 2 LW - Moderate 3 LW - Severe 4 HER - Slight 5 HER - Moderate 6 HER - Severe	-3.5 57.0 163.6 8.3 61.8	18.3 19.2 17.0 9.9 9.8	0.02 0.00 0.57 0.00	0.02	0.00	0.57 0.03 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.06 0.01 0.00			
Year-SIE class			1	2	က	4	ည	9	7	∞	6
1 1985 - Slight 2 1985 - Moderate	-6.6 77.6	27.9	0.03	0.03	0.00	0.56	0.02	0.00	0.74	0.19	0.00
	142.6	18.6 10.5	0.00	0.04	0.00	0.00	00.0	0.31	0.00	0.00	0.00
1986 -	66.2	11.2	0.05	0.70	0.00	0.00		0.01	0.00	0.08	0.00
	3.2	16.4 9.3	0.00	0.21	0.31	0.00	0.00	0.00	00	0.00	0.00
1987 -	34.4		0.19	0.16	0.00	0.18	0.08	0.00	0.07		0.00
	140.7		0.00	0.08	0.95	0.00	0.00	0.41	0.00	0.00	

Table C.9 Mine type x SIE class, 1985

0.1.5	Mir	ne type (1985)	
SIE class	LW	HER	Total
None Slight Moderate Severe	** 71(103.8) ** 28(6.8) ** 14(5.7) ** 4(.7)	952(919.2) ** 39(60.2) 42(50.3) 3(6.3)	1023 67 56 7
Total	117	1036	1153

 $\chi^2 = 115.836$  with 3 df

Critical value  $\chi^2_{.01} = 11.3$ 

Conclusion: significant SIE class x mine type interaction. The degree of SIE is affected by mine type. More severe SIE was noted in the LW mine type.

**Observed value significantly different than expected value (.01).

Table C.9 Mine type x SIE class 1985 (continued)

CIE	Mi	ne type (1985)	
SIE class	LW	HER	Total
None and slight	99(110.6)	991(979.4)	1090
Moderate and severe	** 18(6.4)	45(56.6)	63
Total	117	1036	1153

 $\chi^2 = 24.756$  with 1 df

Critical  $\chi^{2}_{.01} = 6.63$ 

Conclusion: significant SIE class x mine type interaction. Moderate or severe SIE occurred relatively more frequently in LW than in HER mines.

**Observed value significantly different than expected value (.01).

Table C.10 Slope x SIE class, 1985

		SIE class	
Slope class (%)	None and slight	Moderate and severe	Total
0-1	769(788.7)	**39(19.3)	808
1-4	1128(1132.4)	32(27.6)	1160
4-7	1064(1056.2)	18(25.8)	1082
7-30	725(708.7)	** 1(17.3)	726
Total	3686	90	3776

 $\chi^2 = 39.467$  with 3 df

$$\chi^2_{.01} = 11.3$$

$$\chi^2_{.05} = 7.81$$

Conclusion: significant SIE class x slope interaction in 1985.

**Observed value significantly different than expected value (.01).

Table C.11 Mine type x slope, 1985

Clana alana		Mine type (1985)	
Slope class (%)	LW	HER	Total
0-1	40(30.2)	254(263.8)	294
1-4	32(35.5)	313(309.5)	345
4-7	35(31.6)	272(275.4)	307
7-30	*11(20.7)	190(180.3)	201
Total	118	1029	1147

 $\chi^2 = 9.404$  with 3 df

$$\chi^2_{.01} = 11.3$$
  $\chi^2_{.05} = 7.81$ 

$$\chi^2_{.05} = 7.81$$

Conclusion: some interaction; a relatively higher proportion of LW is more level.

*Observed value significantly different than expected value (.05).

Table C.12 SIE class x soil type (LW only), 1985

		SIE class	
Soil type	None and slight	Moderate and severe	Total
2 3 13 14 72 382	15(16.7) 10(12.1) 51(46.8) 11(10.4) 3(2.6) 1(2.6)	4(2.5) 4(1.9) 3(7.2) 1(1.6) 0(0.4) *2(0.4)	19 14 54 12 3
Total	91	14	105

 $\chi^2 = 14.65$  with 5 df

Conclusion: interaction.

$$\chi^2_{.01} = 15.1$$
  $\chi^2_{.05} = 11.1$ 

$$\chi^2$$
 05 = 11.1

Table C.13 SIE class x soil type (HER only), 1985

		SIE class	
Soil type	None and slight	Moderate and severe	Total
2	79(86.1)	**11(3.9)	90
3	46(45.9)	2(2.1)	48
13	528(525.3)	21(23.7)	549
14	193 (192.3)	8(8.7)	201
72	24(23.0)	0(1.0)	24
382	16(15.3)	0(0.7)	16
814	45(43.1)	0(1.9)	45
Total	931	42	973

 $\chi^2 = 17.65$  with 6 df

Conclusion: interaction.

$$\chi^2$$
 01 = 16.8

$$\chi^2_{.01} = 16.8$$
  $\chi^2_{.05} = 12.6$ 

^{*}Observed value significantly different than expected value (.05).

^{**}Observed value significantly different than expected value (.01).

Table C.14 SIE class x soil type (LW and HER), 1985

		SIE class	
Soil type	None and slight	Moderate and severe	Total
2	94(103.3)	**15(5.7)	109
3	56(58.8)	6(3.2)	62
13	579(571.7)	24(31.3)	603
14	204(201.9)	9(11.1)	213
72	27(25.6)	0(1.4)	27
382	17(18.0)	2(1.0)	19
814	45(42.7)	0(2.3)	45
Total	1022	56	1078

 $y^2 = 25.77$  with 6 df

Conclusion: interaction.

$$\chi^2_{.01} = 16.8$$
  $\chi^2_{.05} = 12.6$ 

$$\chi^2$$
 05 = 12.6

Table C.15 Mine type x soil type (all slopes), 1985

	Mine type			
Soil type	LW	HER	Total	
2	**19(10.6)	90(98.4)	109	
3	**14(6.0)	48(56.0)	62	
13	54(58.7)	549(544.3)	603	
14	12(20.7)	201 (192.3)	213	
72	3(2.6)	24(24.4)	27	
382	3(1.9)	16(17.1)	19	
814	* 0(4.4)	45(40.6)	45	
Total	105	973	1078	

 $\chi^2 = 29.30$  with 6 df

Conclusion: interaction.

$$\chi^2_{.01} = 16.8$$
  $\chi^2_{.05} = 12.6$ 

$$x^2$$
 ns = 12.6

^{**}Observed value significantly different than expected value (.01).

^{**}Observed value significantly different than expected value (.01).

^{*}Observed value significantly different than expected value (.05).

Table C.16 Mine type x soil type (slope 3 or 1), 1985

	Mine type		
Soil type	LW	HER	Total
2	*19(11.6)	90(97.4)	109
3	**13(6.3) [']	46(52.7)	59
13	25(34.7)	302(292.3)	327
14	* 0(5.6)	53(47.4)	53
72	3(2.9)	24(24.1)	27
382	3(2.0)	16(17.0)	19
Total	63	531	594

 $\chi^2 = 23.12$  with 5 df

Conclusion: interaction.

$$\chi^2_{.01} = 15.1$$
  $\chi^2_{.05} = 11.1$ 

$$\chi^2_{.05} = 11.1$$

**Observed value significantly different than expected value (.01).

*Observed value significantly different than expected value (.05).

Table C.17 Mine type x soil type (slope = 1), 1985

Soil type	Mine type			
	LW	HER	Total	
2 3 13 14 72 382	19(13.5) 0 (2.5) 9(11.9) 0 (.5) 3 (3.3) 3(2.3)	90(95.5) 20(17.5) 87(84.1) 4 (3.5) 24(23.7) 16(16.7)	109 20 96 4 27 19	
Total	34	241	275	

 $\chi^2 = 7.56$  with 5 df

Conclusion: no significant interaction.

$$\chi^2_{.01} = 15.1$$
  $\chi^2_{.05} = 11.1$ 

$$\chi^2$$
 05 = 11.1

Table C.18 Mine type x SIE class, 1986

SIE	Mine type (1986)		
	LW	HER	Total
None Slight Moderate Severe	*111(135.0) ** 31(8.4)	1390(1365.0) * 62(84.6) 50(47.3) 5(9.1)	1500 93 52 10
Total	149	1506	1655

 $x^2 = 93.761$  with 3 df

 $\chi^2_{.01} = 11.3 = critical value$ 

Conclusion: SIE class x mine type interaction. Degree of SIE is affected by mine type. SIE class 4 is a larger percentage of LW than of HER.

**Observed value significantly different than expected value (.01).

*Observed value significantly different than expected value (.05).

Table C.18 (continued)

SIE	Mine type (1986)		
	LW	HER	Total
None and slight Moderate Severe	142(143.4) 2(4.7) **5(.9)	1451(1449.6) 50(47.3) 5(9.1)	1593 52 10
Total	149	1506	1655

 $\chi^2 = 22.245$  with 2 df

$$\chi^2_{.01} = 9.21$$
  $\chi^2_{.05} = 5.99$ 

Conclusion: SIE class x mine type interaction. Specifically, a higher percentage of LW had severe SIE than HER.

Table C.18 (continued)

	Mine type (1986)		
SIE class	LW	HER	Total
None and slight	142(143.4)	1451(1449.6)	1593
Moderate and severe	17(5.6)	55(56.4)	62
Total	149	1506	1655

 $\chi^2 = 0.3998$  with 1 df

Critical  $\chi^2_{.01} = 6.63$   $\chi^2_{.05} = 3.84$ 

Conclusion: no SIE class x mine type interaction.

Table C.19 Slope x SIE class, 1986

Slope class (%)	SIE class		
	None and slight	Moderate and severe	Total
0-1	1139(1161.7)	**46(23.3)	1185
1-4	1316(1319.5)	30(26.5)	1346
4-7	1193(1176.4)	<b>**</b> 7(23.6)	1200
7-30	681(671.5)	** 4(13.5)	685
Total	4329	87	4416

 $\chi^2 = 41.760$  with 3 df

 $\chi^{2}.01 = 11.3$   $\chi^{2}.05 = 7.81$ 

Conclusion: SIE class x slope interaction in 1986.

**Observed value significantly different than expected value (.01).

Table C.20 Mine type x slope, 1986

Slope class (%)	Mine type (1986)		
	LW	HER	Total
0-1	52 (43.2)	428 (436.8)	480
1-4	42 (43.8)	445 (443.2)	487
4-7	43 (39.6)	397 (400.4)	440
7-30	*12 (22.3)	236 (225.7)	248
Total	149	1506	1655

 $\chi^2 = 7.599$  with 3 df

$$\chi^2_{.01} = 11.3$$
  $\chi^2_{.05} = 7.81$ 

$$\chi^2_{.05} = 7.81$$

Conclusion: in 1986, no slope x mine type interaction.

*Observed value significantly different than expected value (.05).

Table C.21 SIE class x soil type (LW only), 1986

Soil type	SIE class		
	None and slight	Moderate and severe	Total
2 3 13 14 72 382	20(19.9) 13(13.2) 89(87.0) 12(11.3) 4(4.7) 1(2.8)	1(1.1) 1(0.8) 3(5.0) 0(0.7) 1(0.3) **2(0.2)	21 14 92 12 5 3
Total	139	8	147

 $\chi^2 = 20.74$  with 5 df

Conclusion: interaction.

$$\chi^2_{.01} = 15.1$$
  $\chi^2_{.05} = 11.1$ 

**Observed value significantly different than expected value (.01).

Table C.22 SIE class x soil type (HER only), 1986

Soil type	SIE class			
	None and slight	Moderate and severe	Total	
2 3 13 14 72 382 814	107(108.6) 63(63.0) 786(785.5) 252(249.2) 39(39.8) 24(25.2) 44(43.6)	5(3.4) 2(2.0) 24(24.5) 5(7.8) 2(1.2) 2(0.8) 1(1.4)	112 65 810 257 41 26 45	
Total	1315	41	1356	

 $\chi^2 = 4.35$  with 6 df

Conclusion: no significant interaction.

$$\chi^2_{.01} = 16.8$$
  $\chi^2_{.05} = 12.6$ 

$$\chi^2_{.05} = 12.6$$

Table C.23 SIE class x soil type (LW and HER), 1986

Soil type	SIE class			
	None and slight	Moderate and severe	Total	
2	127(128.7)	6(4.3)	133	
3	76(76.4)	3(2.6)	79	
13	875(872.6)	27(29.4)	902	
14	264 (260.2)	5(8.8)	269	
72	43(44.5)	3(1.5)	46	
382	25(28.1)	** 4(0.9)	29	
814	44(43.5)	1(1.5)	45	
Total	1454	49	1503	

 $\chi^2 = 15.40$  with 6 df

Conclusion: interaction.

$$x^2$$
 n1 = 16.8

$$\chi^2_{.01} = 16.8$$
  $\chi^2_{.05} = 12.6$ 

^{**}Observed value significantly different than expected value (.01).

Table C.24 Mine type x soil type (all slopes), 1986

	Mine	type	
Soil type	LW	HER	Total
2	*21(13.0)	112(120.0)	133
2 3	*14(7.7)	65(71.3)	79
13	92(88.2)	810(813.8)	902
14	**12(26.3)	257(242.7)	269
72	5(4.5)	41(41.5)	46
382	3(2.8)	26(26.2)	29
814	* 0(4.4)	45(40.6)	45
Total	147	1356	1503

 $x^2 = 24.92$  with 6 df

Conclusion: interaction.

$$\chi^2_{.01} = 16.8$$
  $\chi^2_{.05} = 12.6$ 

**Observed value significantly different than expected value (.01).

*Observed value significantly different than expected value (.05).

Table C.25 Mine type x soil type (slope 3 or 1), 1986

	Mine type		
Soil type	LW	HER	Total
2	21(14.4)	112(118.6)	133
2 3	13(8.2)	63(67.8)	76
13	48 (52.9)	440(435.1)	488
14	*0(6.3)	58(51.7)	58
14 72	5(5.0)	41(41.0)	46
382	3(3.1)	26(25.9)	29
Total	90	740	830

 $\chi^2 = 14.12$  with 5 df

Conclusion: interaction is significant at 5% level but not at 1% level.

$$\chi^2_{.01} = 15.1$$
  $\chi^2_{.05} = 11.19$ 

Table C.26 Mine type x soil type (slope = 1), 1986

	Mine	type	
Soil type	LW	HER	Total
2 3 13 14 72 382	21(15.3) 0(3.6) 16(16.6) 0(0.9) 5(5.3) 3(3.3)	112(117.7) 31(27.4) 129(128.4) 8(7.1) 41(40.7) 26(25.7)	133 31 145 8 46 29
Total	45	347	392

 $\chi^2 = 7.56$  with 5 df

Conclusion: no significant interaction.

$$\chi^2_{.01} = 15.1$$
  $\chi^2_{.05} = 11.1$ 

$$\chi^2_{.05} = 11.1$$

Table C.27 Mine type x SIE class, 1987

	Mine type (1987)			
SIE class	LW	HER	Total	
None Slight Moderate Severe	**127(182.6) ** 69(21.7) ** 11(4.5) 3(1.2)	1540(1484.4) ** 129(176.3) 30(36.5) 8(9.8)	1667 198 41 11	
Total	210	1707	1917	

 $\chi^2 = 148.38$  with 3 df

$$\chi^2_{.01} = 11.3$$

$$\chi^2_{.01} = 11.3$$
  $\chi^2_{.05} = 7.81$ 

Conclusion: SIE class x mine type interaction. Degree of SIE is influenced by mine type. SIE class 4, 3, and 2 are a larger percentage of LW than of HER.

Table C.27 (continued)

	Mine type (1987)		
SIE class	LW	HER	Total
None and slight Moderate Severe	196(204.3) ** 11(4.5) 3(1.2)	1669(1660.7) 30(36.5) 8(9.8)	1865 41 11
Total	210	1707	1917

 $x^2 = 13.96$  with 2 df

$$\chi^2_{.01} = 9.21$$
  $\chi^2_{.05} = 5.99$ 

$$\chi^2_{.05} = 5.99$$

Conclusion: SIE class x mine type interaction. A higher percentage of LW had severe or moderate SIE than HER.

**Observed value significantly different than expected value (.01).

Table C.27 (continued)

CIF	Mine type (1987)		
SIE	LW	HER	Total
None and slight Moderate and severe	196(204.3)	1669(1660.7)	1865
	** 14(5.7)	38(46.3)	52
Total	210	1707	1917

 $x^2 = 13.95$  with 1 df

$$\chi^2_{.01} = 6.63$$
  $\chi^2_{.05} = 3.84$ 

$$\chi^2.05 = 3.84$$

Conclusion: SIE class x mine type interaction. Moderate and severe SIE class has larger percentage of LW than of HER.

Table C.28 Slope x SIE class, 1987

01	SIE class				
Slope class (%)	None	Slight	Moderate	Severe	Total
0-1	1256(1306.5)	126(96.9)	33(16.8)	9(3.8)	1424
1-4	1468(1476.2)	123(109.5)	15(19.0)	3(4.3)	1609
4-7	1325(1301.0)	80(96.5)	11(16.7)	2(3.8)	1418
> 7	766(731.3)	28(54.2)	3(9.4)	0(2.1)	797
Total	4815	357	62	14	5248

 $\chi^2 = 63.204$  with 9 df

 $\chi^2_{.01} = 21.7$   $\chi^2_{.05} = 16.9$ 

Conclusion: SIE class x slope interaction in 1987.

Table C.28 (continued)

Slope class (%)	SIE class			
	None and slight	Moderate and severe	Total	
0-1	1382(1403.4)	**42(20.6)	1424	
1-4	1591(1585.7)	18(23.3)	1609	
4-7	1405(1397.5)	13(20.5)	1418	
> 7	794(785.5)	* 3(11.5)	797	
Total	5172	76	5248	

 $\chi^2 = 32.94$  with 3 df

 $\chi^2_{.01} = 11.3$ 

 $\chi^2_{.05} = 7.81$ 

Conclusion: SIE class x slope interaction in 1987.

**Observed value significantly different than expected value (.01).

Table C.29 Mine type x slope, 1987

	M-	ine type (1987)	
Slope class (%)	LW	HER	Total
0-1	74(59.3)	467(481.7)	541
1-4	61(61.6)	501(500.4)	562
4-7	56(56.5)	460(459.5)	516
7-30	*19(32.6)	279(265.4)	298
Total	210	1707	1917

 $x^2 = 10.47$  with 3 df

$$\chi^2_{.01} = 11.3$$
  $\chi^2_{.05} = 7.81$ 

$$\chi^2$$
 05 = 7.81

Conclusion: some interaction. A relatively higher proportion of LW is slope class 0-1. A relatively higher proportion of HER is slope class 7-30.

*Observed value significantly different than expected value (.05).

Table C.30 SIE class x soil type (LW only), 1987

Soil type	SIE class			
	None and slight	Moderate and severe	Total	
2 3 13 14 72 382	19(20.4) 14(13.0) 115(114.0) 19(17.6) 5(4.6) 5(7.4)	3(1.6) 0(1.0) 8(9.0) 0(1.4) 0(0.4) **3(0.6)	22 14 123 19 5 8	
Total	177	14	191	

 $\chi^2 = 14.84$  with 5 df

Conclusion: interaction.

$$\chi^2_{.01} = 15.1$$
  $\chi^2_{.05} = 11.1$ 

$$\chi^2_{.05} = 11.1$$

Table C.31 SIE class x soil type (HER only), 1987

Soil type	SIE class			
	None and slight	Moderate and severe	Total	
2	107(112.0)	** 7(2.0)	114	
3	67(66.8)	1(1.2)	68	
13	929 (923.4)	11(16.6)	940	
14	285(281.9)	2(5.1)	287	
72	44(46.2)	* 3(0.8)	47	
382	23(25.5)	** 3(0.5)	26	
814	47 (46.2)	0(0.8)	47	
Total	1502	27	1529	

 $\chi^2 = 36.31$  with 6 df

Conclusion: interaction.

$$\chi^2_{.01} = 16.8$$
  $\chi^2_{.05} = 12.6$ 

$$\chi^2$$
 05 = 12.6

Table C.32 SIE class x soil type (LW and HER), 1987

Soil type	SIE class			
	None and slight	Moderate and severe	Total	
2 3 13 14 72 382 814	126(132.8) 81(80.0) 1044(1037.7) 304(298.7) 49(50.8) 28(33.2) 47(45.9)	**10(3.2) 1(2.0) 19(25.3) * 2(7.3) 3(1.2) ** 6(0.8) 0(1.1)	136 82 1063 306 52 34 47	
Total	1679	41	1720	

 $y^2 = 59.36$  with 6 df

Conclusion: interaction.

$$x^2$$
 or = 16.8

$$\chi^2_{.01} = 16.8$$
  $\chi^2_{.05} = 12.6$ 

^{**}Observed value significantly different than expected value (.01). *Observed value significantly different than expected value (.05).

^{**}Observed value significantly different than expected value (.01).

^{*}Observed value significantly different than expected value (.05).

Table C.33 Mine type x soil type (all slopes), 1987

	Mine		
Soil type	. LW	HER	Total
2	22(15.1)	114(120.9)	136
3	14(9.1)	68(72.9)	82
13	123(118.0)	940(945.0)	1063
14	* 19(34.0)	287 (272.0)	306
72	5(5.8)	47(46.2)	52
382	* 8(3.8)	26(30.2)	34
814	* 0(5.2)	47 (41.8)	47
Total	191	1529	1720

 $\chi^2 = 25.23$  with 6 df

Conclusion: interaction.

$$\chi^2_{.01} = 16.8$$
  $\chi^2_{.05} = 12.6$ 

$$\chi^2_{.05} = 12.6$$

*Observed value significantly different than expected value (.05).

Table C.34 Mine type x soil type (slope 3 or 1), 1987

	Mine		
Soil type	LW	HER	Total
2 3 13 14 72 382	22(17.5) 13(10.2) 71(72.2) ** 0(8.0) 5(6.7)	114(118.5) 66(68.8) 490(488.8) 62(54.0) 47(45.3)	136 79 561 62 52 34
Total	8(4.4) 119	26(29.6) 805	924

 $\chi^2 = 15.29$  with 5 df

Conclusion: interaction.

$$\chi^2_{.01} = 15.1$$
  $\chi^2_{.05} = 11.1$ 

$$\chi^2_{.05} = 11.1$$

Table C.35 Mine type x soil type (slope = 1), 1987

Soil type  2 3 13 14 72 382	Mine		
	LW	HER	Total
	22(19.5) * 0(4.7) 27(23.1) 0(1.1) 5(7.0) 6(4.6)	114(116.5) 33(28.3) 134(137.9) 8(6.9) 44(42.0) 26(27.4)	136 33 161 8 49 32
Total	60	359	419

 $\chi^2 = 9.06$  with 5 df

Conclusion: no significant interaction.

 $\chi^2_{.01} = 15.1$ 

 $\chi^2_{.05} = 11.1$ 

*Observed value significantly different than expected value (.05).

Table C.36 SIE class x year, LW mining

SIE class	1985	1986	1987	Total
None and slight	102(107)	151(147)	196(194)	449
Moderate and severe	14(9)	8(11)	14(16)	36
Total	116	159	210	485

 $\chi^2 = 4.209$  with 2 df

 $\chi_{2.01} = 9.21$   $\chi_{0.05}^2 = 5.99$ 

Conclusion: no significant SIE class x year interaction for LW mining. SIE consistent from year to year.

Table C.37 SIE class x year, HER mining

SIE class	198	1986	1987	Total
None and slight	977 (988)	1451(1458)	1669(1651)	4097
Moderate and severe	44(33)	56(49)	* 38(56)	138
Total	1021	1507	1707	4235

 $\chi^2 = 10.804$  with 2 df

$$\chi^2_{.01} = 9.21$$
  $\chi^2_{.05} = 5.99$ 

Conclusion: for HER, year x SIE class interaction was noted. Frequency of moderate or severe SIE was somewhat less than expected in 1987.

^{*}Observed value significantly different than expected value (.05).









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